Oak Creek Canyon Residential Subdivision
Initial Study/Mitigated Negative Declaration
ENV-02-16

CITY OF CLAYTON

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City of Clayton
Community Development Department
6000 Heritage Trail
Clayton, California 94517
(925) 673-7340

August 2020

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INTRODUCTION

West Coast Home Builders, Inc., has proposed to subdivide a portion of a 9.03-acre site into six single-family residential lots. The project site is located on the north side of Marsh Creek Road opposite the intersection of Marsh Creek Road and Diablo Parkway. The project site has been annexed to the City of Clayton.

This Initial Study/Mitigated Negative Declaration (IS/MND) identifies potentially significant environmental impacts for the following environmental areas:

- Biological Resources;
- Cultural Resources;
- Geology and Soils;
- Hazards and Hazardous Materials;
- Noise; and
- Tribal Cultural Resources.

Environmental analysis determined that measures were available to mitigate potential adverse impacts to insignificant levels. As a result, a Mitigated Negative Declaration has been prepared pursuant to Public Resources Code Section 21064.5, and Article 6 of the California Environmental Quality Act (CEQA) Guidelines.

Pursuant to the requirements of CEQA Guidelines Section 15071, this Negative Declaration describes the proposed project; identifies, analyzes, and evaluates the potential significant environmental impacts, which may result from the proposed project; and identifies measures to mitigate adverse environmental impacts. With implementation of the included mitigation measures, the project would not have a significant impact on the environment.

I. PROJECT/APPLICANT INFORMATION

1.	Project Title:	Oak Creek Canyon Residential Subdivision Project
2.	Lead Agency Name and Address:	City of Clayton 6000 Heritage Trail Clayton, CA 94517
3.	Contact Person and Phone Number:	Matthew Feske Community Development Director City of Clayton (925) 673-7343
4.	Project Location:	North side of Marsh Creek Road, at intersection with Diablo Parkway Clayton, CA 94517
5.	Project Sponsor's Name and Address:	West Coast Home Builders, Inc 4061 Port Chicago Highway Concord, CA 94520 Contact: Kevin English (925) 682-6419
6.	Existing General Plan Designations:	Single-Family Low Density (LD) Public/Quasi-Public (PQ) Private Open Space (PR)
7.	Proposed General Plan Designations:	Single-Family Low Density (LD) Private Open Space (PR)
8.	Existing Marsh Creek Road Specific Plan Designations:	Low Density Residential Open Space
9.	Proposed Marsh Creek Road Specific Plan Designations:	Low Density Residential Private Open Space
10.	Existing Zoning Designations:	Single-Family Residential (R-10) Public Facility (PF)
11.	Proposed Zoning Designations:	Planned Development (PD)

12. Project Description Summary:

The proposed project would include development of a total of six single-family residential lots, an internal drive, and a bio-retention basin in the southeast portion of the project site; the remainder of the project site would remain vacant and undeveloped. Access to the site would be provided by a new roadway that would extend northeastward through the site from the existing Marsh Creek

Road/Diablo Parkway intersection. City of Clayton entitlements include a General Plan Map Amendment, Zoning Map Amendment, re-approval of the expired Vesting Tentative Map, Development Plan Review Permit, and a Tree Removal Permit.

The environmental factors checked below would be potentially affected by this project. The following Evaluation of Environmental Impacts identifies at least one impact that is "Less Than Significant with Mitigation Incorporated" for each of the checked environmental factors.

☐ **Aesthetics**	☐ **Agriculture and Forest Resources**	☐ **Air Quality**
✖ **Biological Resources**	✖ **Cultural Resources**	☐ **Energy**
✖ **Geology and Soils**	☐ **Greenhouse Gas Emissions**	✖ **Hazards and Hazardous Materials**
☐ **Hydrology and Water Quality**	☐ **Land Use and Planning**	☐ **Mineral Resources**
✖ **Noise**	☐ **Population and Housing**	☐ **Public Services**
☐ **Recreation**	☐ **Transportation**	✖ **Tribal Cultural Resources**
☐ **Utilities and Service Systems**	☐ **Wildfire**	☐ **Mandatory Findings of Significance**

II. DETERMINATION

On the basis of this initial evaluation:

☐ I find that the Proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

X I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case since the Project proponent has made revisions in the Project and has agreed to the mitigation measures listed in "Section V. List of Mitigation Measures." I further find that the mitigation measures and the information in this study constitute a MITIGATED NEGATIVE DECLARATION in accordance with Section 15071 of the State CEQA Guidelines.

☐ I find that the Proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature Date

Matthew Feske
Community Development Director

III. BACKGROUND

The Oak Canyon Creek Annexation and Residential Subdivision Project was approved by the City of Clayton on April 5, 2005, along with adoption of an Initial Study/Mitigated Negative Declaration (IS/MND); however, the project was never constructed.[1] The previously-approved entitlements for the project included a property annexation, a General Plan Amendment, an amendment to the *Marsh Creek Road Specific Plan*, pre-zoning of the project site, a tentative subdivision map for six single-family lots and a bio-retention basin, and a Development Plan Review Permit for home landscape and design, and the stormwater basin. It should be noted that the General Plan Amendment pertained to a parcel that is not included in the current project proposal.

Given that original project was never constructed, several project entitlements have since expired. In addition, the project applicant has modified the project to include six homes instead of the five homes included in the original proposal, and the size of the proposed bio-retention basin has been reduced. As discussed in greater detail below, the project applicant is requesting approval of a General Plan Amendment, Zoning Map Amendment, Marsh Creek Road Specific Plan Map Amendment, new Vesting Tentative Subdivision Map, Development Plan Review Permit, and a Tree Removal Permit.

This IS/MND identifies and analyzes the potential environmental impacts of the current proposal for the Oak Creek Canyon Project. The information and analysis presented in this document is organized in accordance with the order of the CEQA checklist in Appendix G of the CEQA Guidelines. If the analysis provided in this document identifies potentially significant environmental effects of the project, mitigation measures that should be applied to the project are prescribed.

This IS/MND relies on site-specific studies prepared for the project, the City of Clayton General Plan, the *Marsh Creek Road Specific Plan,* the *Marsh Creek Road Specific Plan Environmental Impact Report* (Specific Plan EIR)*,*[2] and, where applicable, information from the 2005 Initial Study previously approved by the City.

IV. PROJECT DESCRIPTION

A description of the project location and setting, the components of the project, and project entitlements is provided below.

Site Location and Setting

The proposed project site consists of approximately 9.03 acres of land located northwest of the intersection of Marsh Creek Road and Diablo Parkway in the City of Clayton, California (see Figure 1 and Figure 2). The site is identified by Assessor's Parcel Number (APN) 119-070-008.

[1] City of Clayton. *Initial Environmental Study/Negative Declaration (ENV 02-03).* April 5, 2005.
[2] City of Clayton. *Marsh Creek Road Specific Plan Environmental Impact Report.* June 28, 1995.

Figure 1
Regional Location Map

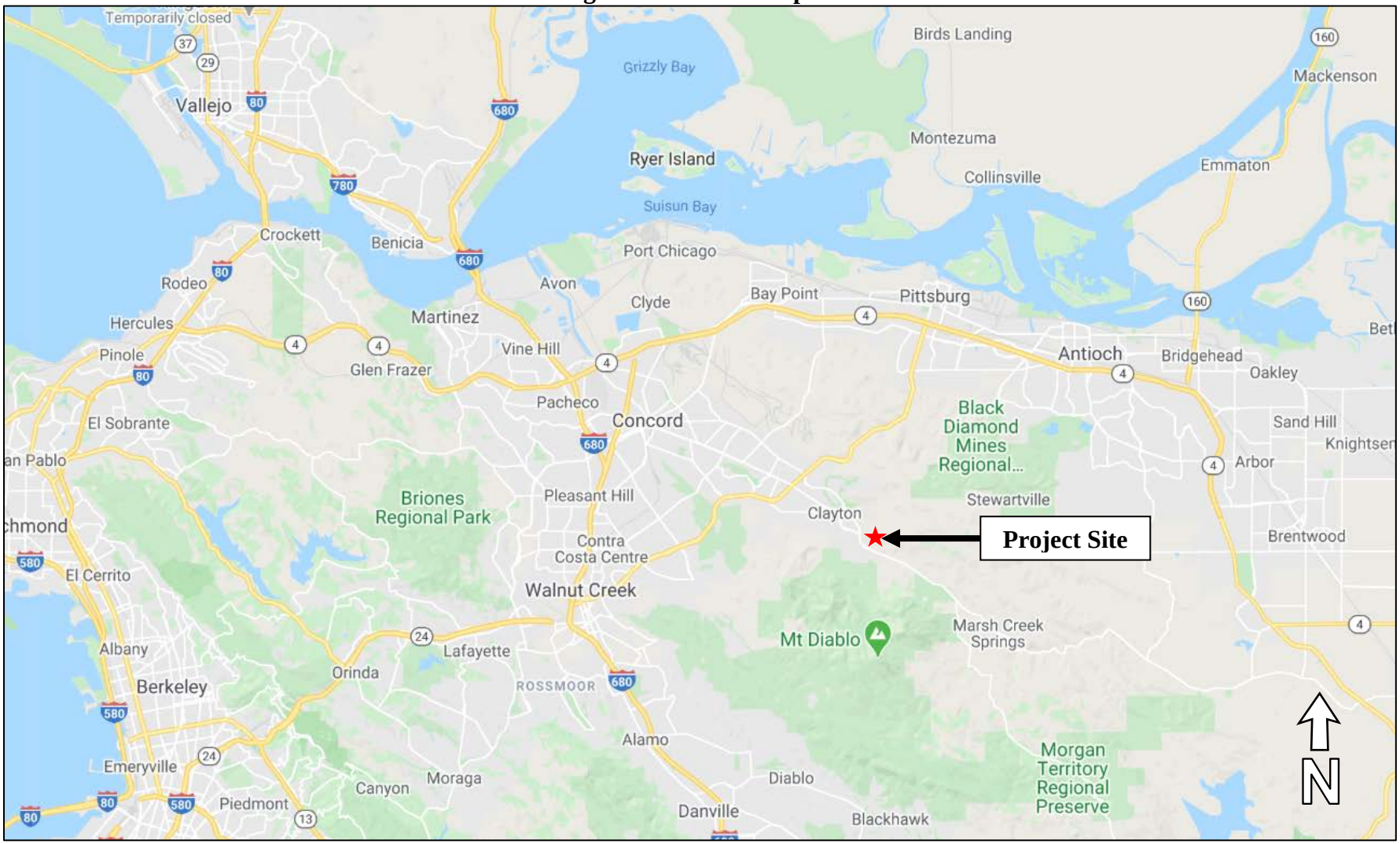


Figure 2
Project Site

The proposed project site, as well as the areas to the northeast and east of the project site, are within the planning area of the *Marsh Creek Road Specific Plan*, within unincorporated Contra Costa County. [3] The areas west, north, and south of the project site are outside of the *Marsh Creek Road Specific Plan*, but within the Clayton city limits. The site is designated Single-Family Low Density (LD), Public/Quasi-Public (PQ), and Private Open Space (PR) per the City of Clayton General Plan and zoned Single-Family Residential (R-10) and Public Facility (PF). The Marsh Creek Road Specific Plan designation for the site is Open Space and Low Density Residential.

Currently, the project site is vacant and undeveloped, consisting primarily of annual grasses and weedy vegetation. The site slopes downward from north to south towards Marsh Creek Road along the site's southern boundary. An existing drainage swale traverses the southeast portion of the project site in a northeast to southwest direction and discharges into a storm drain system at the intersection of Marsh Creek Road and Diablo Parkway.

The central portion of the site wraps around a 1.68-acre parcel owned by the Contra Costa County Water District (CCCWD). The CCCWD parcel contains a 500,000-gallon water tank, various associated infrastructure, and a small number of trees. Vehicular access and pipeline easements serving the water tank on the CCCWD parcel cross the western portion of the proposed project site, extending towards Marsh Creek Road. In addition, several oil pipeline operation and maintenance easements owned by Getty Oil Company are situated along the eastern site boundary. Within the easements are a 20-inch vacant pipeline operated by Crimson and a 16-inch gas line operated by Phillips 66. Four active oil pipelines are located in Marsh Creek Road along the project site frontage. One is a 20-inch pipeline owned by Crimson Midstream, LLC. The other three lines along Marsh Creek Road consist of a 16-inch pipeline, a 20-inch pipeline, and a 24-inch pipeline operated by Coalinga-Avon.

Surrounding Land Uses

The project site is bordered primarily by hilly, undeveloped open space areas to the north and east. The Clayton Community Park is located approximately 750 feet north of the site behind an intervening knoll. Surrounding land uses to the south and west of the project site consist of single-family residential subdivisions.

Project Components

The proposed project would require approval of a General Plan Amendment, Zoning Map Amendment, Marsh Creek Road Specific Plan Map Amendment, Vesting Tentative Subdivision Map, Development Plan Review Permit, and a Tree Removal Permit. Each of the project components is discussed in detail below.

General Plan Map Amendment

The project site is currently designated by the City of Clayton General Plan Land Use Element as LD, PQ, and PR. Single-family dwellings are not consistent with the PQ and PR designation. Therefore, the proposed project includes a General Plan Map Amendment to change the

[3] City of Clayton. *Marsh Creek Road Specific Plan.* Adopted June 28, 1995.

boundaries of the LD and PR areas, and eliminate the PQ designation, which would allow for the construction of six single-family residential lots (see Figure 3).

Marsh Creek Road Specific Plan Map Amendment

The project site is currently designated by the Marsh Creek Road Specific Plan Low Density Residential and Open Space. The MCRSP allows for alternative Open Space preservation. The Marsh Creek Road Specific Plan Map Amendment would allow the project site to include Private Open Space (see Figure 4).

Zoning Map Amendment

The project site is currently zoned R-10 and PF. R-10 allows the construction of residences for the owner or lessee, while PF is intended to provide areas for public facilities such as government offices, public safety facilities, and other public land uses. The proposed project includes a request to rezone the entire site from R-10 and PF to Planned Development (PD) in order to encompass the residential uses, private open space, and bioretention basin (see Figure 5).

Vesting Tentative Subdivision Map

The proposed Vesting Tentative Subdivision Map would subdivide the site into a total of six single-family residential lots and a bio-retention basin in the southeast portion of the project site (see Figure 6 and Figure 7). As indicated on the Vesting Tentative Map, all homes would be set back a minimum of 80 feet from the Marsh Creek Road property line, consistent with Specific Plan Policy DD-2d. Access to the site would be provided by a new roadway that would extend northeastward through the site from the existing Marsh Creek Road/Diablo Parkway intersection.

Grading

Per the Preliminary Grading Plan, the site would be graded to create building pads for Lots #1 through #6 and the proposed roadway. Grading would consist of cutting back portions of the hill to the north of the building pads on Lots #1 through #5 and adding fill material between the new building pads and the proposed road. In addition, a bench for a drainage ditch would be created to the north of the proposed building pads. Slopes above the bench would range from 3:1 to 2:1 slopes, whereas slopes between the bench and the building pads would all be 2:1. The portion of the development area fronting Marsh Creek Road would have more gradual slopes (3:1). To the south of the proposed road, the hill would be graded at a 3:1 slope to accommodate the building pad for Lot #6. Retaining walls would be constructed at the northern edge of the building pads on Lots #1, #2, and #3 for additional slope protection.

Utilities

Water and sewer utilities to serve the proposed development would be extended within the new on-site roadway from existing Contra Costa Water District and City sewer lines located in Marsh Creek Road (see Figure 8).

Figure 3
General Plan Exhibit

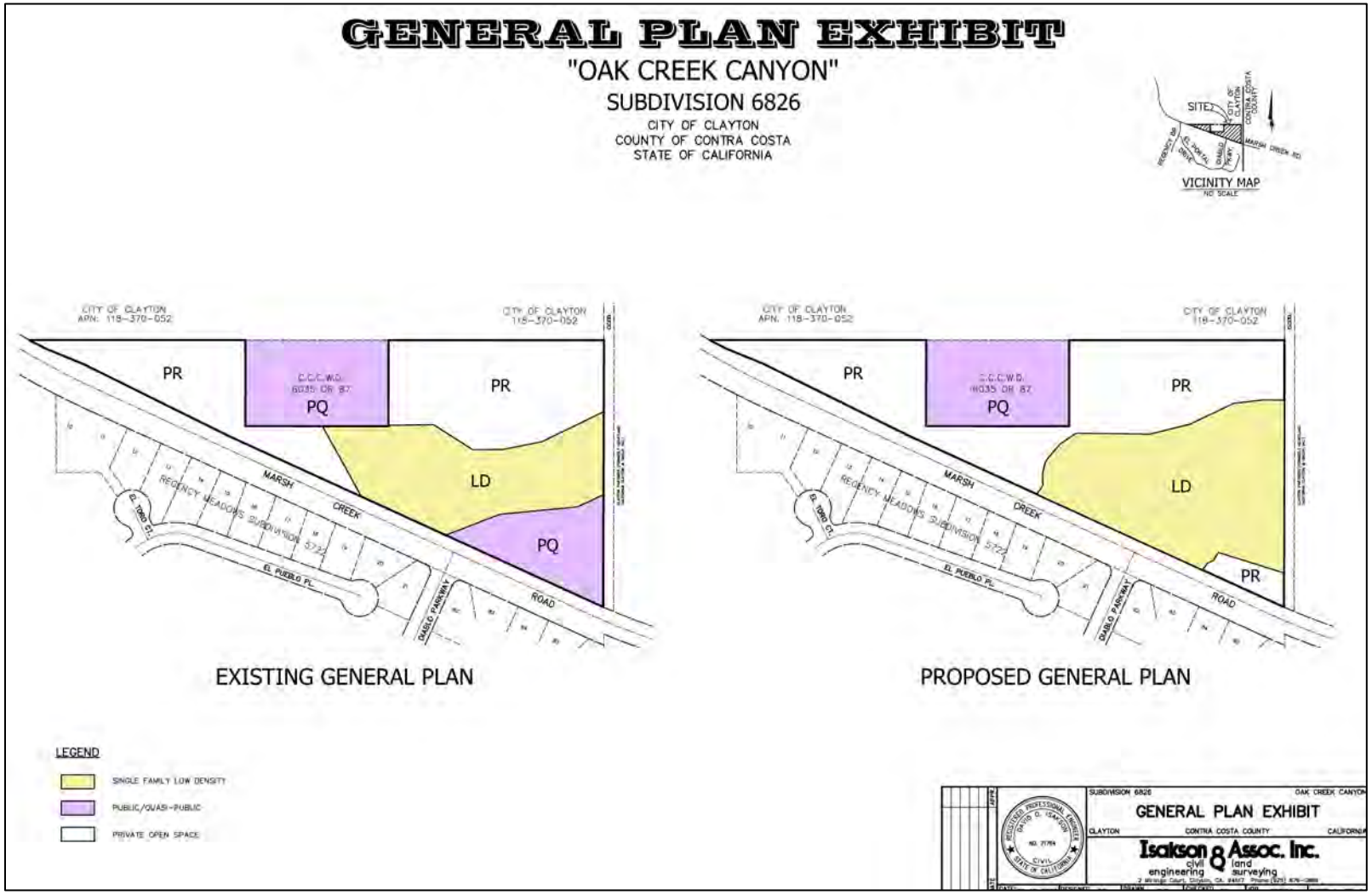


Figure 4
Marsh Creek Road Specific Plan Exhibit

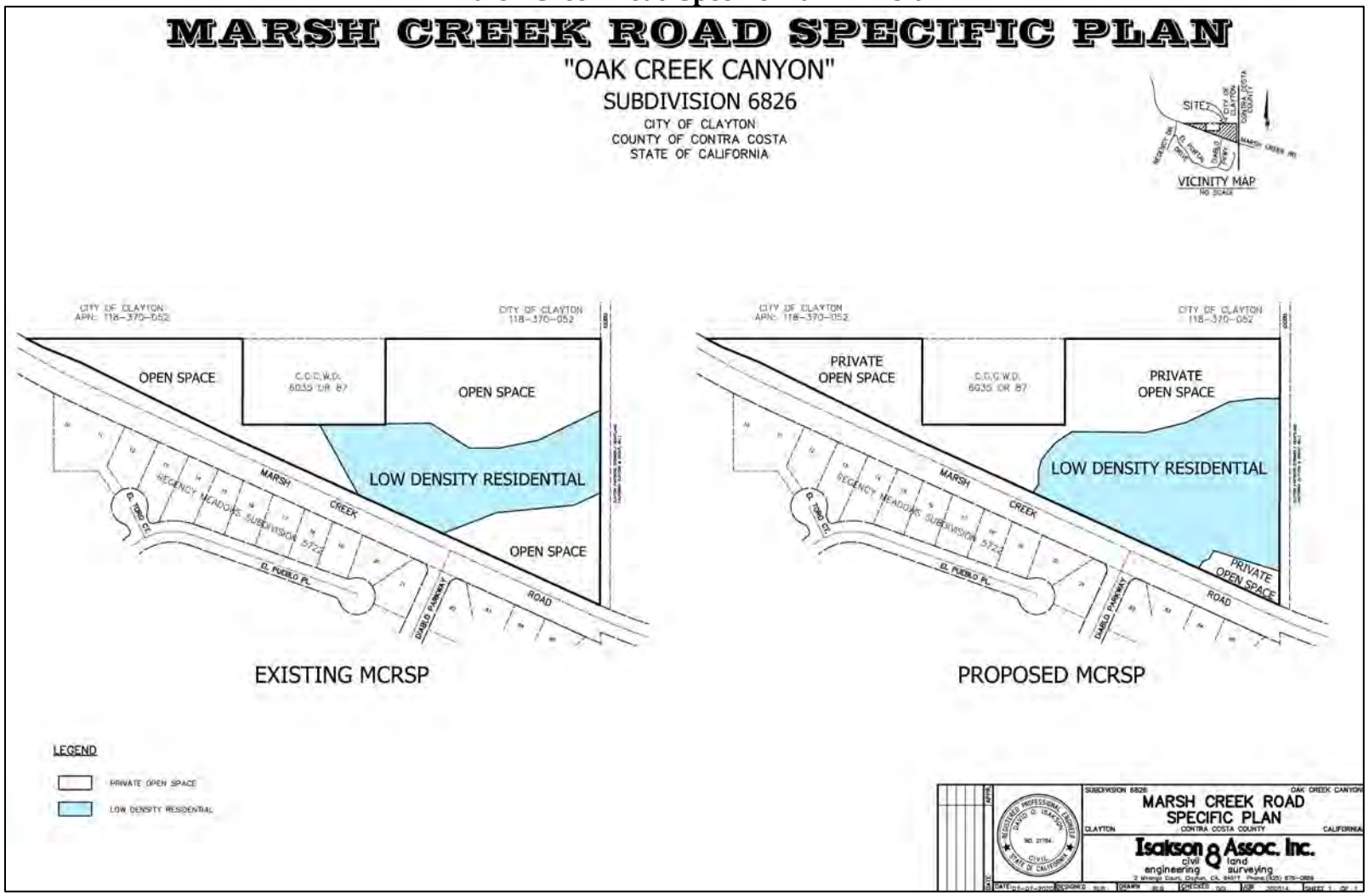


Figure 5
Zoning Exhibit

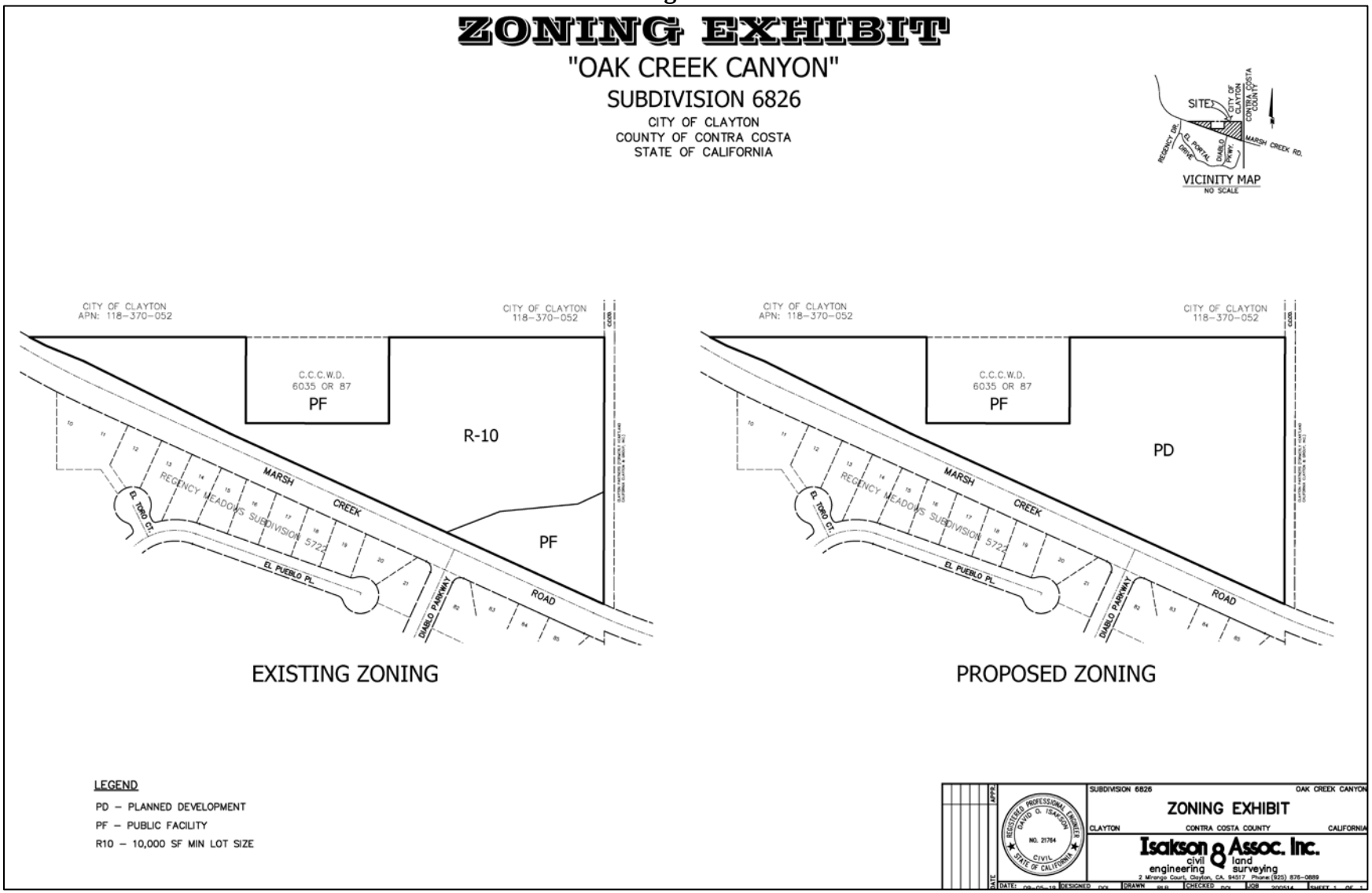


Figure 6
Vesting Tentative Subdivision Map

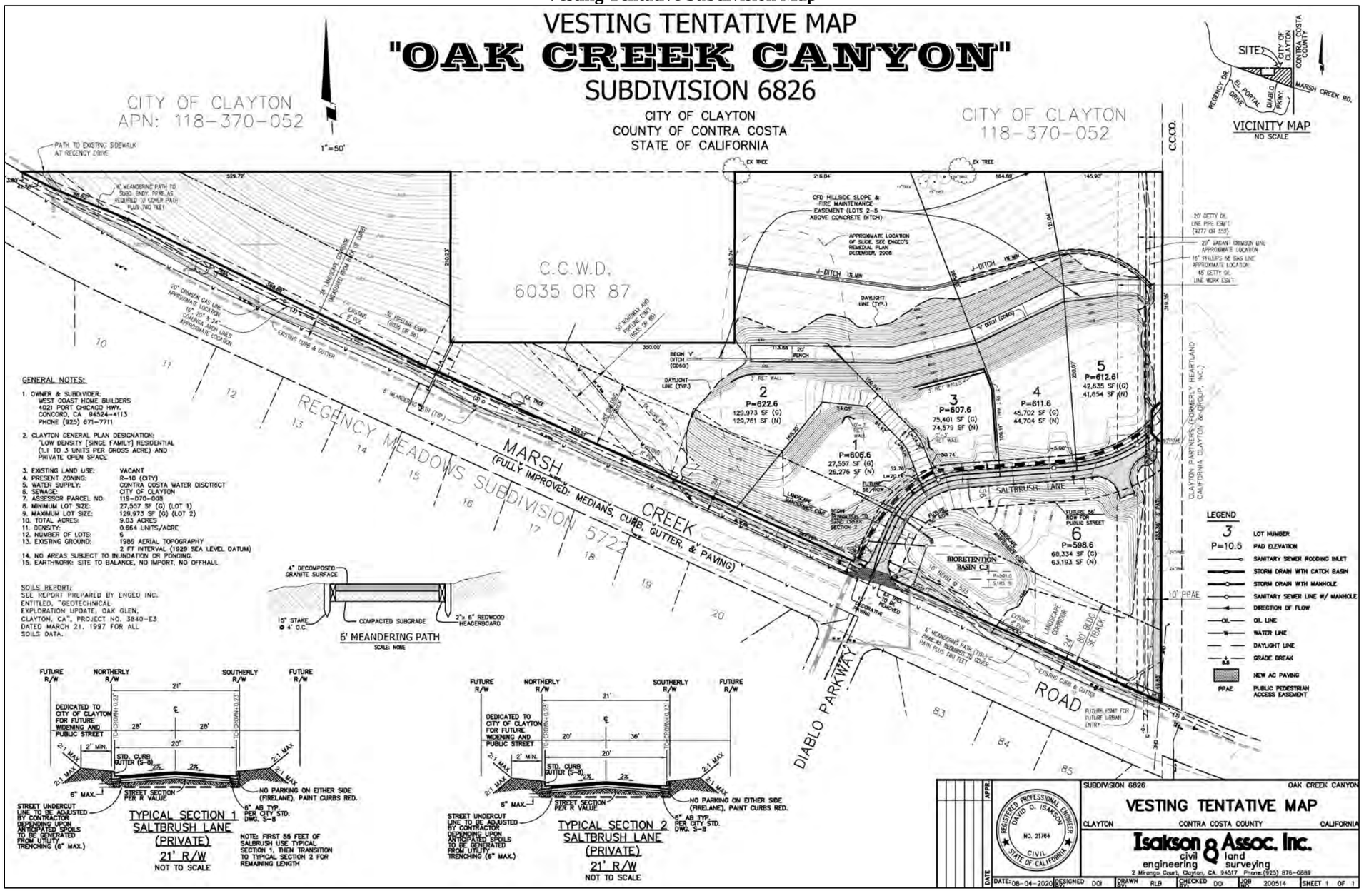


Figure 7
Site Development Plan

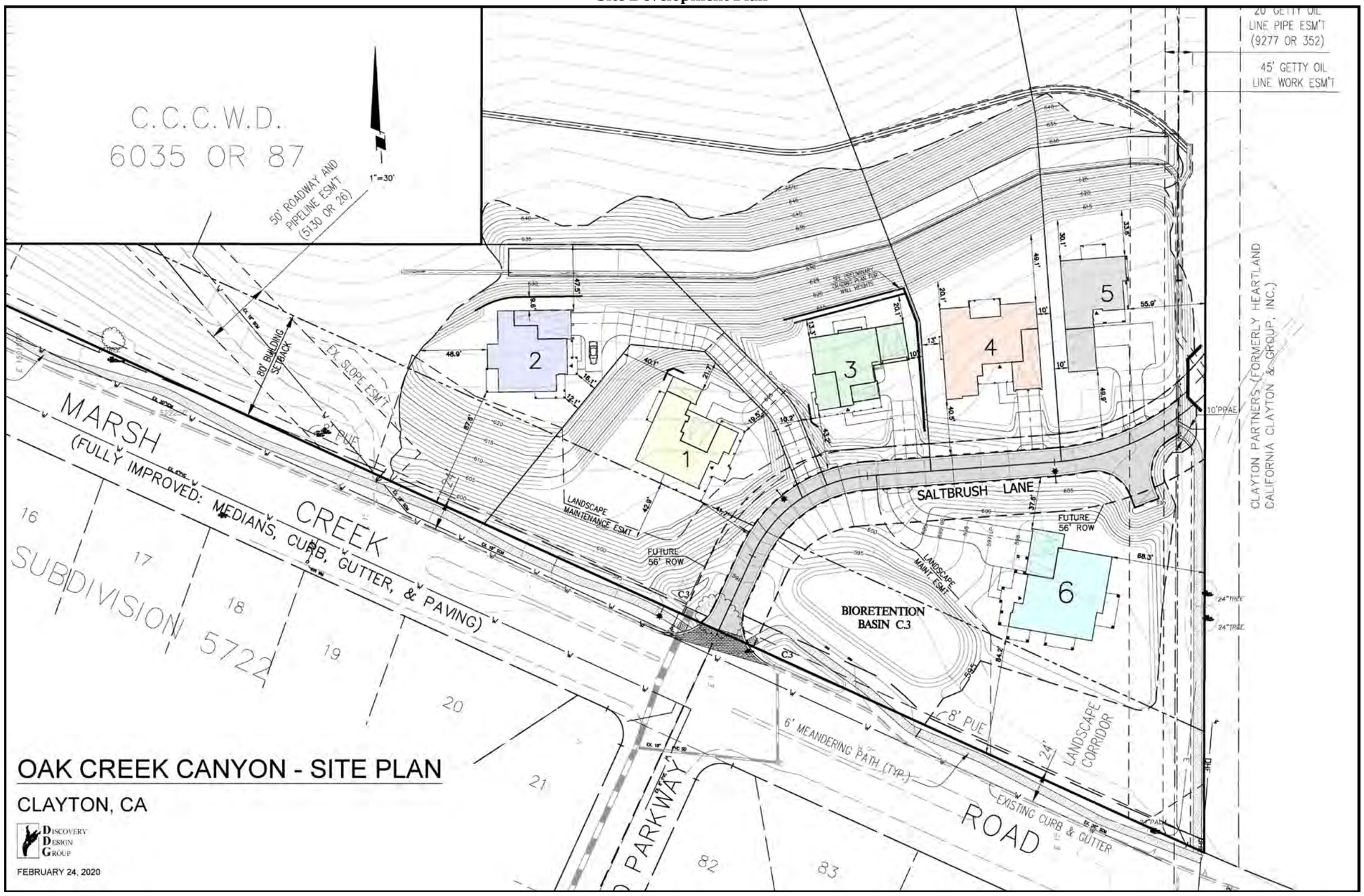
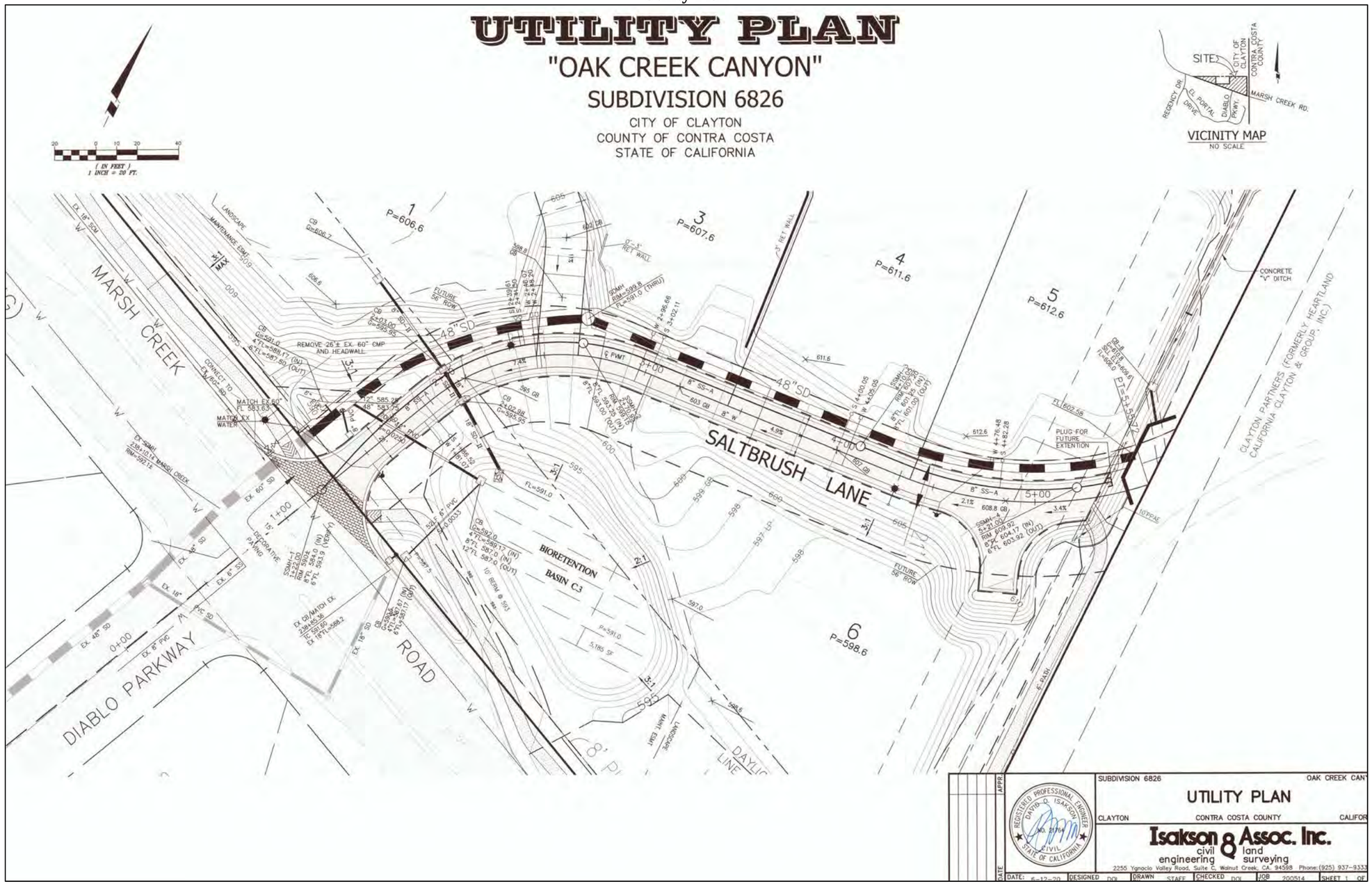


Figure 8
Utility Plan



With respect to stormwater, runoff from pavement and rooftop areas from Lots #1-#6 and pavement from the proposed roadway would drain to the main bioretention basin west of Lot #6. (see Figure 9). Runoff from undeveloped areas of the project site will primarily be self-treating. For example, runoff from the upslope portions of the residential lots would be intercepted by a proposed v-ditch, which would route runoff around Lot #5 and into the proposed 48-inch storm drain pipe in the proposed roadway. The 48-inch pipe would transport the stormwater to the City's existing 60-inch storm drain under Marsh Creek Road and Diablo Parkway in a similar manner as the existing drainage swale.

Landscaping and Sound Walls

As shown in Figure 10 and Figure 11, the proposed project would incorporate landscaping features throughout the developed portions of the project site, within the Marsh Creek Road median, and along the project frontage. A 24-foot landscape corridor would be provided along the Marsh Creek Road frontage and include various types of trees, shrubs, and ground cover. The proposed landscaping would include 24-inch box trees, as well as one-gallon and five-gallon shrubs. In addition, a six-foot-wide meandering trail would be provided along the project site frontage. The trail would run along Marsh Creek Road from the east and connect to an existing sidewalk at Regency Drive, located west of the project site.

Furthermore, a six-foot tall sound wall would be included at the south and east edges of the Lot #6 building pad, and at the south edge of the Lot #1 building pad. Other fencing improvements would also be included as part of the proposed project (see Figure 12 and Figure 13 for details). The proposed fencing improvements would include the construction of a split rail fence along the project site frontage at Marsh Creek Road and the eastern site boundary. In addition, an open space fence, split view fence, and good neighbor fence would be constructed near the proposed lots within the site. The open space fencing would be used to divide Lots #2 through #5, above the drainage bench, while the split view fence would be located within the western portion of Lot #2. The good neighbor fence is located where some privacy is warranted. In locations near Marsh Creek Road, sound walls would be constructed rather than the split view fence (see Figure 16).

Development Plan Review Permit

The proposed project would require approval of a Development Plan Review Permit for the proposed single-family residences on Lots #1 through #6 and a bioretention basin within Lot #6. Lots #1 through #3, and Lot #5, would contain two-story homes, whereas Lots #4 and #6 would contain single-story homes. The residences on Lots #5 and #6 would include adequate setbacks from existing petroleum pipeline easements located within the eastern boundary of the project site. Total living area of the proposed residences would range from 3,049 square feet (sf) to 4,587 sf, with building footprints ranging from to 3,105 sf to 5,015 sf. Landscaping would be provided within each residential lot and a bioretention basin would be provided within Lot #6.

Tree Removal Permit

A tree removal permit would be required for the proposed removal of nine trees on the site.

Figure 9
Stormwater Control Plan

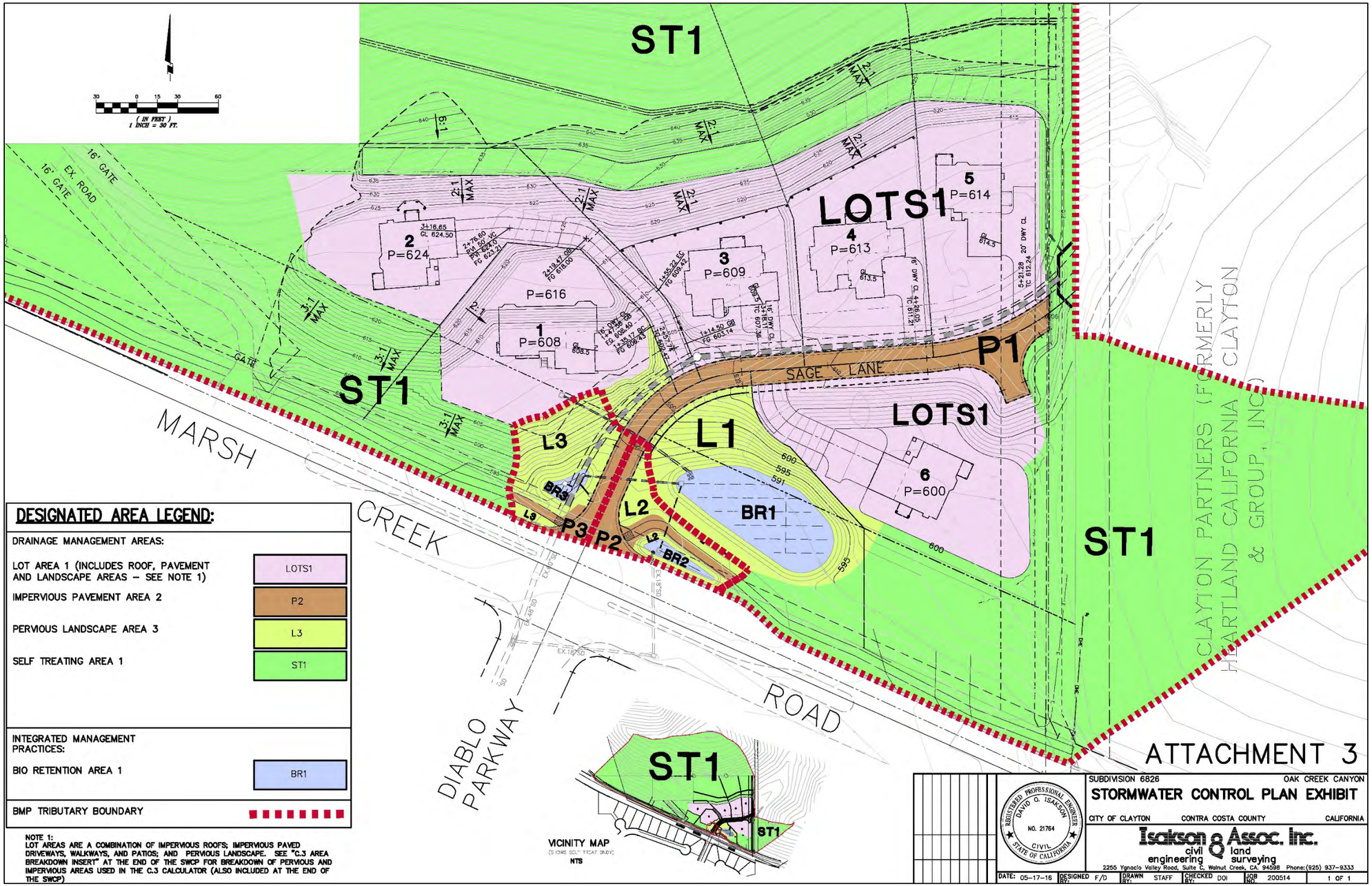


Figure 10
Landscape Plan (East)

Figure 11
Landscape Plan (West)

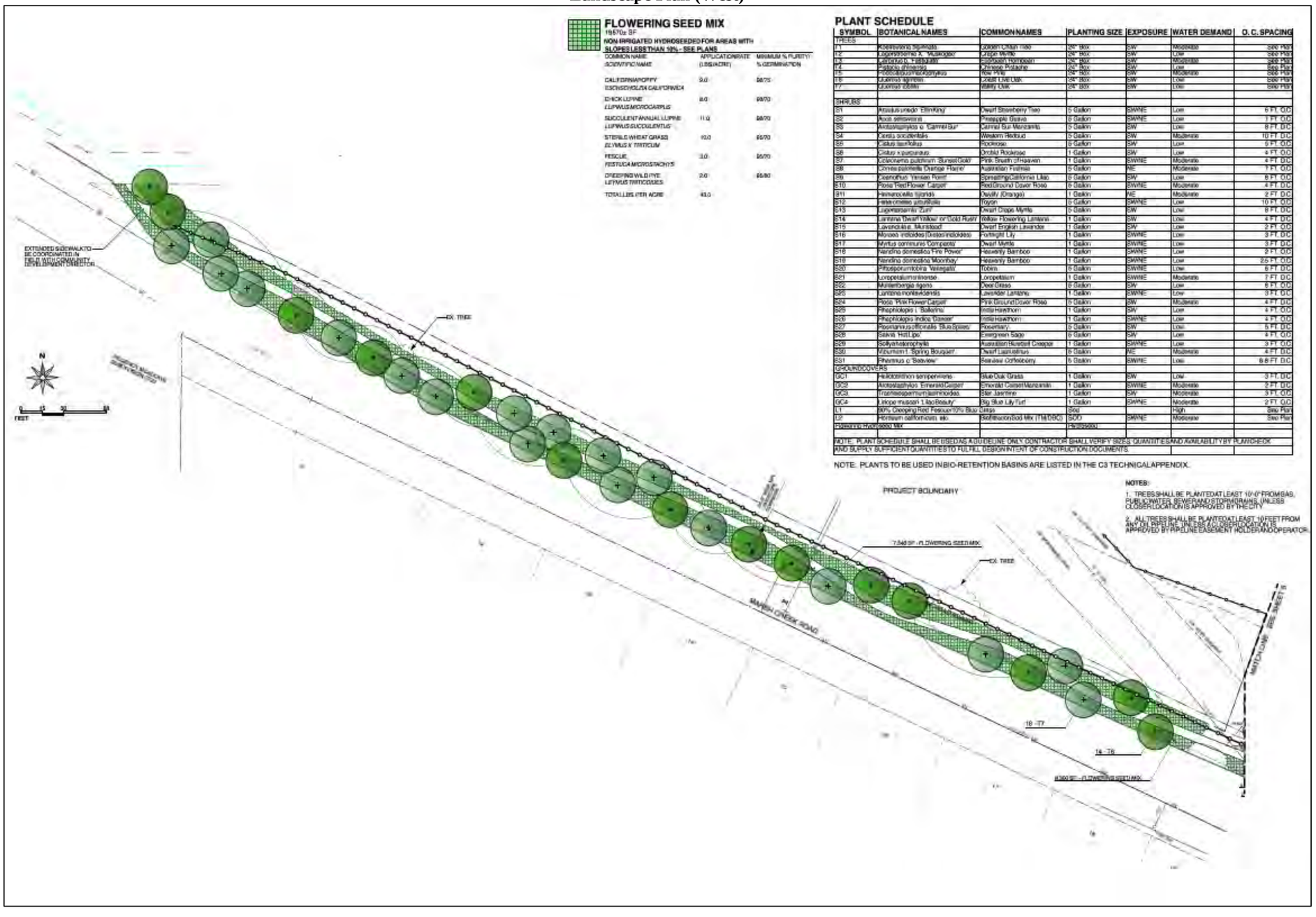


Figure 12
Layout Plan

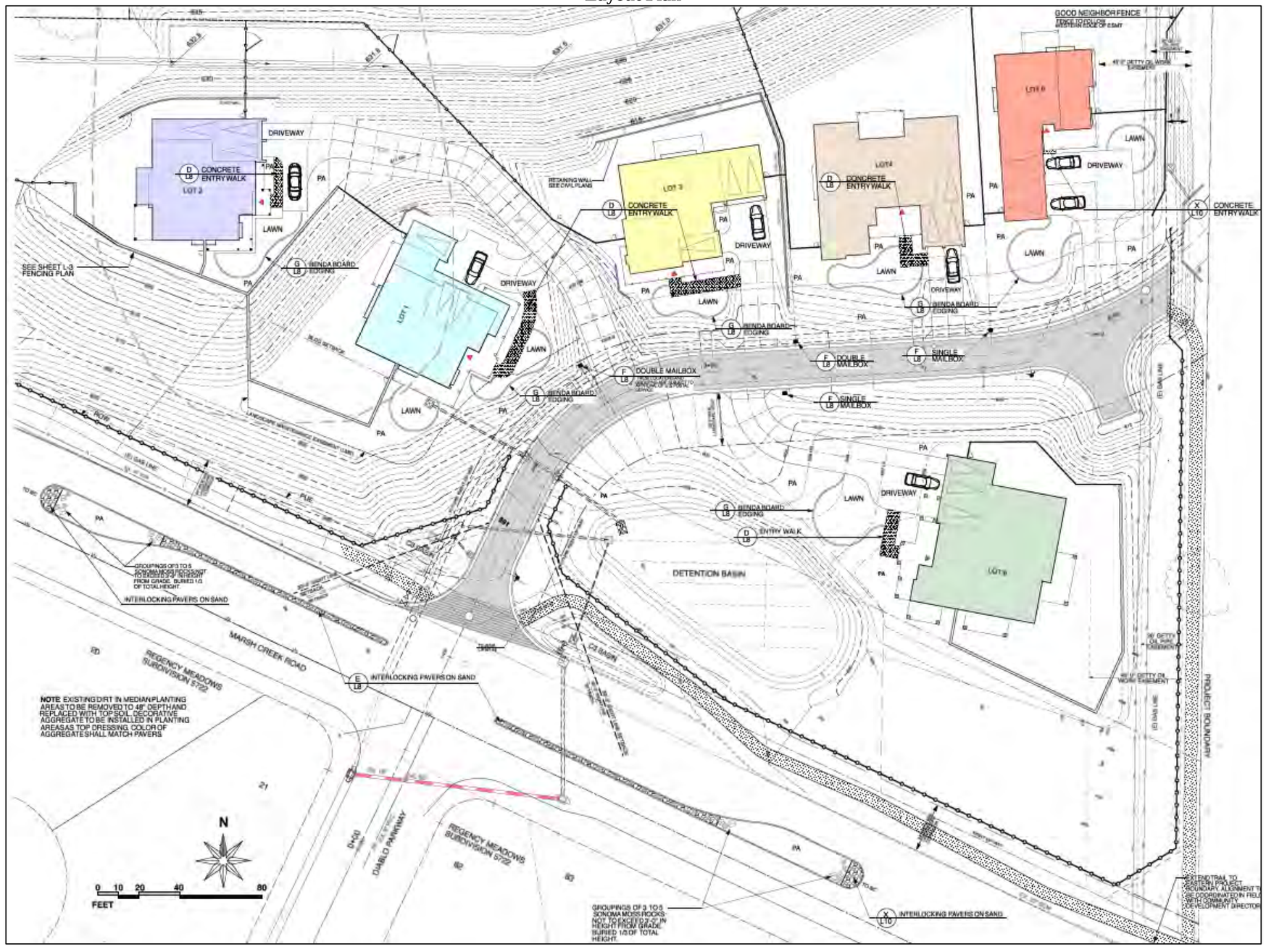
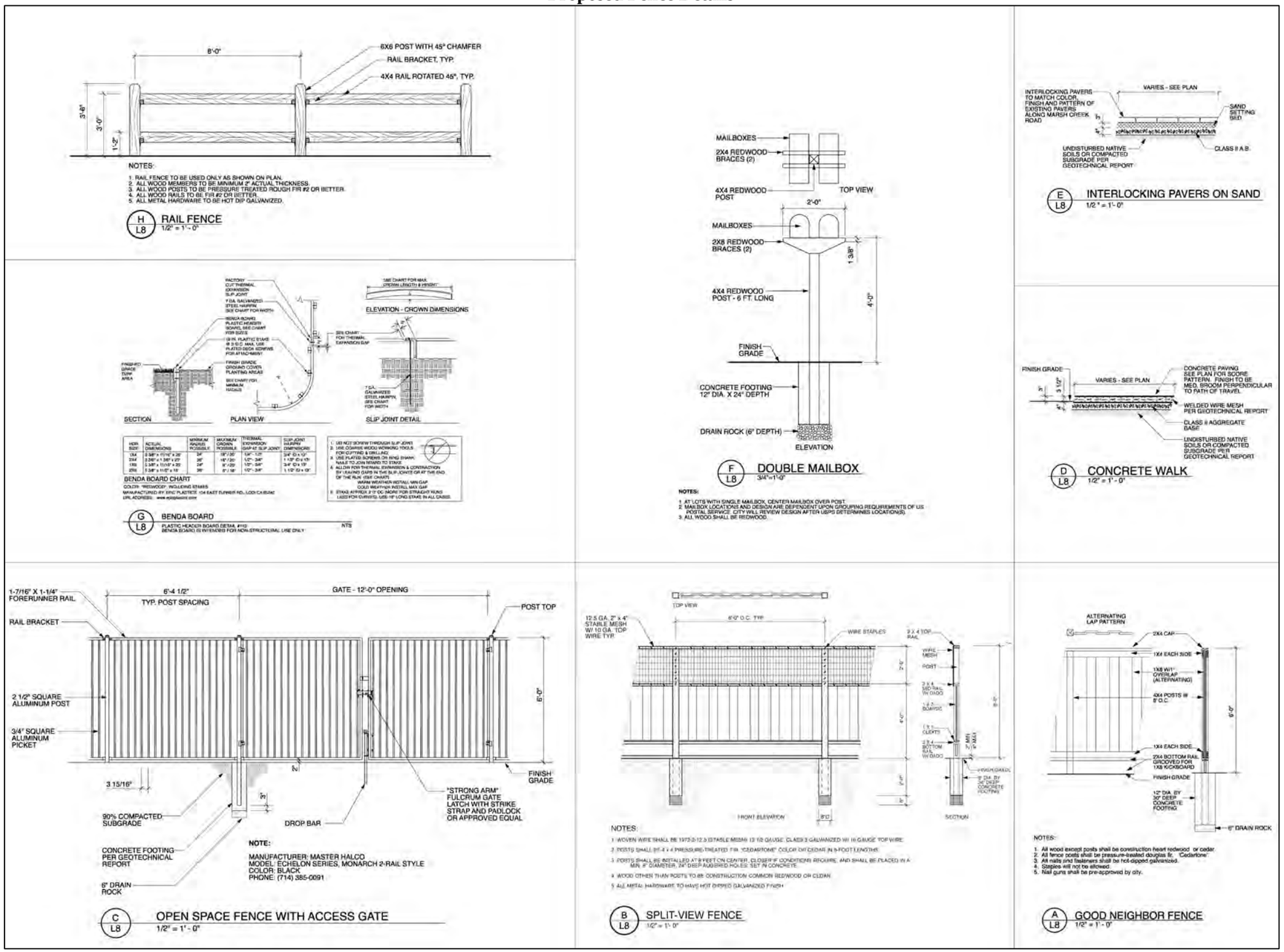


Figure 13
Proposed Fence Details



Discretionary Actions

As discussed in detail above, the proposed project would require the following approvals from the City of Clayton:

- General Plan Map Amendment;
- Marsh Creek Road Specific Plan Map Amendment;
- Zoning Map Amendment;
- Vesting Tentative Subdivision Map;
- Development Plan Review Permit; and
- Tree Removal Permit.

VI. LIST OF MITIGATION MEASURES

Mitigation Measure 1. *Prior to any ground disturbance related to covered activities, a USFWS/CDFW-approved biologist shall conduct a preconstruction survey in areas identified in the planning surveys as having potential burrowing owl habitat. The surveys shall establish the presence or absence of western burrowing owl and/or habitat features and evaluate use by owls in accordance with CDFW survey guidelines (California Department of Fish and Game 1995).*

On the parcel where the activity is proposed, the biologist shall survey the proposed disturbance footprint and a 500-foot radius from the perimeter of the proposed footprint to identify burrows and owls. Adjacent parcels under different land ownership shall not be surveyed. Surveys shall take place near sunrise or sunset in accordance with CDFW guidelines. All burrows or burrowing owls shall be identified and mapped. Surveys shall take place no more than 30 days prior to construction. During the breeding season (February 1 to August 31), surveys shall document whether burrowing owls are nesting in or directly adjacent to disturbance areas. During the nonbreeding season (September 1 to January 31), surveys shall document whether burrowing owls are using habitat in or directly adjacent to any disturbance area. Survey results shall be valid only for the season (breeding or nonbreeding) during which the survey is conducted.

If burrowing owls are found during the breeding season (February 1 to August 31), the project proponent shall avoid all nest sites that could be disturbed by project construction during the remainder of the breeding season or while the nest is occupied by adults or young. Avoidance shall include establishment of a non-disturbance buffer zone (described below). Construction may occur during the breeding season if a qualified biologist monitors the nest and determines that the birds have not begun egg-laying and incubation or that the juveniles from the occupied burrows have fledged. During the nonbreeding season (September 1 to January 31), the project proponent should avoid the owls and the burrows they are using, if possible. Avoidance shall include the establishment of a buffer zone (described below).

During the breeding season, buffer zones of at least 250 feet in which no construction activities can occur shall be established around each occupied burrow (nest site). Buffer zones of 160 feet shall be established around each burrow being used during the nonbreeding season. The buffers shall be delineated by highly visible, temporary construction fencing.

If occupied burrows for burrowing owls are not avoided, passive relocation shall be implemented. Owls should be excluded from burrows in the immediate impact zone and within a 160-foot buffer zone by installing one-way doors in burrow entrances. These doors should be in place for 48 hours prior to excavation. The project area should be monitored daily for 1 week to confirm that the owl has abandoned the burrow. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation (California Department of Fish and Game 1995). Plastic tubing or a similar structure should be inserted in the tunnels during excavation to maintain an escape route for any owls inside the burrow.

Mitigation Measure 2. *If work is scheduled to take place between February 1 and August 31, a pre-construction nesting bird survey shall be conducted by a qualified biologist within 14 days of construction, covering a radius of 250 feet for non-listed raptors and 100 feet for non-*

listed passerines at all locations. The findings of the survey shall be submitted to the Community Development Department. If an active bird nest is found within these buffers, species-specific measures shall be prepared by a qualified biologist and implemented to prevent abandonment of the active nest. At a minimum, grading in the vicinity of a nest shall be postponed until the young birds have fledged. If an active nest is present, a minimum exclusion buffer of 100 feet shall be maintained during construction, depending on the species and location. The perimeter of the nest setback zone shall be fenced or adequately demarcated with stakes and flagging at 20-foot intervals, and construction personnel and activities restricted from the area. A survey report by a qualified biologist verifying that no active nests are present, or that the young have fledged, shall be submitted prior to initiation of grading in the nest-setback zone. The qualified biologist shall serve as a biological monitor during those periods when construction activities occur near active nest areas to ensure that no inadvertent impacts on these nests occur.

Mitigation Measure 3. *Protocol-level special-status plant surveys were conducted within the project area in April, June, August and October of 2018, and no special-status plant species were identified. Survey results are valid for three years. If construction does not commence before Spring of 2021, then new focused plant surveys shall be performed according to CDFW and CNPS protocol, as generally described below. Surveys for rare plant species shall be conducted using approved CDFW/USFWS methods during the appropriate season for identification of large flowered fiddleneck, big tarplant, round-leaved filaree, Mt. Diablo fairy lantern, diamond-petaled poppy, and showy golden madia. The blooming periods for each species is described in the Biological Resources Assessment prepared for the proposed project by Swaim Biological, Inc.*

If during surveys ECCHCP/NCCP covered or no take species are found, the location, extent and condition of all occurrences shall be documented in a survey report and submitted to the City of Clayton. CNDDB California Native Species Field Survey Forms for all covered or no-take plants encountered on the site shall also be completed and submitted to the City of Clayton and CNDDB.

Results of surveys shall inform project design. In order to comply with the ECCHCP/NCCP, construction activities shall avoid all impacts on extremely rare no take species and shall implement plant salvage when impacted covered plant species are unavoidable. Conservation measures described in the ECCHCP/NCCP shall be adhered to. If a rare plant is found that is not covered by the ECCHCP/NCCP, appropriate conservation measures similar to those required by the ECCHCP/NCCP shall be developed on a plant by plant basis and in accordance with CDFW and CNPS.

Mitigation Measure 4. *Prior to approval of grading plans for the proposed project, the project applicant shall complete a formal wetland delineation and submit the delineation to the U.S. Army Corps of Engineers (USACE) for verification.*

In the event that the proposed project site is determined to include jurisdictional wetlands that would be altered as part of the proposed development, a Section 404 permit for fill of jurisdictional wetlands shall be acquired, and mitigation for impacts to jurisdictional waters that cannot be avoided shall conform with the USACE "no-net-loss" policy prior to approval of grading plans. To the extent feasible, however, the project shall be designed to avoid and minimize adverse effects to waters of the U.S. or jurisdictional waters of the State of California within the project area.

Mitigation for impacts to both federal and State jurisdictional waters shall be addressed using these guidelines.

If a Section 404 permit is obtained, the applicant must also obtain a water quality certification from the RWQCB under Section 401 of the Clean Water Act (CWA). Written verification of the Section 404 permit and the Section 401 water quality certification shall be submitted to the Community Development Department.

The applicant shall also provide evidence to the Community Development Department of consultation with CDFW to determine if a Streambed Alteration Agreement is required for on-site activities pursuant to Section 1602 of the State Fish and Game Code.

If the mapped drainage shown on the USGS and other data sources is determined by regulatory agencies to be a jurisdictional waters on the site, then an ECCCHCP/NCCP fee calculation for permanent impacts to wetlands or streams should be assessed in addition to the development fee, unless the design of the proposed project is modified to avoid regulated habitat or provide adequate alternative compensatory mitigation.

Mitigation Measure 5. *The following tree protection measures shall be implemented pursuant to the recommendations listed in the Arborist Report, to the extent feasible:*

a) *The applicant shall submit for the review and approval of the Community Development Director a tree protection plan to identify the location of the existing trees to be retained, as identified in the Arborist Report.*
b) *Adjust the proposed Marsh Creek Road path design to provide two feet of additional clearance from tree #43.*
c) *Prior to construction or grading, the project contractor shall install fencing to construct a temporary Tree Protection Zone (TPZ) around trees #43 and #60.*
d) *TPZ fencing shall remain in an upright sturdy manner from the start of grading until the completion of construction. Fencing shall not be adjusted or removed without consulting the project arborist.*
e) *If roots greater than two-inches in diameter are encountered near tree #61 during construction of the proposed ditch, roots shall be cleanly pruned with a handsaw or sawzall.*
f) *Pruning shall be performed by personnel certified by the International Society of Arboriculture (ISA). All pruning shall adhere to ISA and American National Standards and Best Management Practices.*
g) *Should TPZ encroachment be necessary, the project contractor shall contact the project arborist for consultation and recommendations.*
h) *The project contractor shall keep TPZs free of all construction-related materials, debris, fill soil, equipment, etc. The only acceptable material is mulch spread out beneath the trees.*
i) *Should any damage to the trees occur, the contractor shall promptly notify the project arborist to appropriately mitigate the damage.*

Mitigation Measure 6. *Prior to the issuance of a grading permit, the grading plan shall include a requirement (via notation) indicating that if cultural resources, or human remains are*

encountered during site grading or other site work, all such work shall be halted immediately within 100 feet of the area of discovery and the contractor shall immediately notify the City of the discovery. In such case, the City, at the expense of the project applicant, shall retain the services of a qualified archaeologist for the purpose of recording, protecting, or curating the discovery as appropriate. The archaeologist shall be required to submit to the City for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the vicinity of the discovery, as identified by the qualified archaeologist, shall not be allowed until the preceding steps have been taken.

Mitigation Measure 7. *Pursuant to State Health and Safety Code §7050.5(c) State Public Resources Code §5097.98, if human bone or bone of unknown origin is found during construction, all work shall stop within 100 feet of the vicinity of the find and the Contra Costa County Coroner shall be contacted immediately. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission who shall notify the person believed to be the Most Likely Descendant (MLD). The MLD shall work with the contractor to develop a program for re-internment of the human remains and any associated artifacts. Additional work shall not take place in the immediate vicinity of the find, which shall be identified by the qualified archaeologist at the applicant's expense, until the preceding actions have been implemented.*

Mitigation Measure 8. *Prior to approval of the improvement plans for the project, all recommendations from the Geotechnical Report prepared for the project by ENGEO (2008) shall be incorporated into the improvement plans to the satisfaction of the City Engineer. In addition, the applicant shall retain a California Registered Geotechnical Engineer to perform field observations during grading to determine the depth of removal of compressible soils. Compliance with the recommendations of the Geotechnical Engineer shall be provided to the City Engineer.*

Mitigation Measure 9. *Prior to the issuance of a grading permit, the project applicant shall prepare to the satisfaction of the City Engineer, an erosion control plan that utilizes standard construction practices to limit the erosion effects during construction of the proposed project. Actions should include, but are not limited to:*

a) Hydro-seeding;
b) Placement of erosion control measures within drainage ways and ahead of drop inlets;
c) The temporary lining (during construction activities) of drop inlets with "filter fabric";
d) The placement of straw wattles along slope contours;
e) Use of a designated equipment and vehicle "wash-out" location;
f) Use of siltation fences;
g) Use of on-site rock/gravel road at construction access points; and
h) Use of sediment basins and dust palliatives.

Mitigation Measure 10. *Grading and construction plans and specifications for the project shall include the wording which specifies that construction contractors shall contact all pipeline operators (e.g., Shell, Conoco-Phillips) at least forty-eight (48) hours prior to start of construction activities to obtain detailed identification of underground oil pipes.*

Mitigation Measure 11. *Notification shall be provided on the deeds and California Department of Real Estate disclosure forms to future property owners regarding the presence of crude oil pipelines. The wording of the notification shall be approved by the Clayton Community Development Director and City Attorney.*

Mitigation Measure 12. *During grading and construction, the project contractor shall ensure that the following measures are implemented, consistent with the recommendations in the Environmental Noise and Analysis prepared for the proposed project:*

a) *Grading and construction activities shall be limited to the daytime hours between 7:00 AM to 5:00 PM Monday through Friday, as specified in Section 15.01.101 of the Clayton Municipal Code. Any such work beyond said hours and days shall be strictly prohibited unless previously specifically authorized in writing by the City Engineer or designee or by project conditions of approval;*
b) *All noise-producing project equipment and vehicles using internal-combustion engines shall be equipped with manufacturers-recommended mufflers and be maintained in good working condition;*
c) *All mobile or fixed noise-producing equipment used on the project site that are regulated for noise output by a federal, State, or local agency shall comply with such regulations while in operation on-site;*
d) *Electrically powered equipment shall be used instead of pneumatic or internal combustion-powered equipment, where feasible;*
e) *Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors; and*
f) *Construction site and access road speed limits shall be established and enforced during the construction period.*

The requirements above shall be included, via notation, on the final grading plan submitted for review and approval by the Community Development Director prior to grading permit issuance.

VII. EVALUATION OF ENVIRONMENTAL IMPACTS

1. AESTHETICS.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Have a substantial adverse effect on a scenic vista?	□	□	X	□
b.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	□	□	□	X
c.	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	□	□	X	□
d.	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	□	□	X	□

a. Would the project have a substantial adverse effect on a scenic vista? ..... Less-Than-Significant Impact

Discussion (a.)

The City of Clayton General Plan identifies the protection of scenic resources as a core concern for future development and planning. Impacts to the views of open spaces or vistas would diminish the rural character of the City, and should be avoided. However, the City's General Plan does not contain any policies that address scenic vistas, nor does the General Plan define or identify any specific scenic vistas.

The *Marsh Creek Road Specific Plan* identifies Marsh Creek Road as a Scenic Route. While the project includes a request to amend the General Plan and Marsh Creek Road Specific Plan land use designations, both plans anticipate residential development of the project site at similar densities. In addition, the project includes a mix of single-story and two-story homes so as to break up the massing of the development and enhance views of the upslope portions of the project site. Therefore, the proposed project would not have a substantial adverse effect on a scenic vista, and a ***less-than-significant*** impact would occur.

b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway? ..... No Impact

Discussion (b.)

According to the California Scenic Highway Mapping System, two highways in Contra Costa County are officially-designated State Scenic Highway corridors: [4] Interstate 680 (I-680), from the Alameda County line to the junction with State Route (SR) 24; and SR 24 from the east portal of the Caldecott tunnel to I-680 near Walnut Creek. Neither of the aforementioned corridors provide views of Clayton or the project site. Accordingly, the proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, or historic buildings within a State Scenic Highway. Thus, the project would result in ***no impact***.

c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? ..... Less-Than-Significant Impact

Discussion (c.)

The implementation of the proposed project would change the existing visual setting from vacant grass land to a single-family residential subdivision. The following discussion provides an analysis of the changes in visual character and quality, as viewed from public areas in the project vicinity, that would be expected to occur as a result of the proposed project.

Distinguishing between public and private views is important, because private views are views seen from privately-owned land and are typically associated with individual viewers, including views from private residences. Public views are experienced by the collective public, and include views of significant landscape features and along scenic roads. According to CEQA (Pub. Resources Code, § 21000 et seq.) case law, only public views, not private views, are protected under CEQA. For example, in *Association for Protection etc. Values v. City of Ukiah* (1991) 2 Cal.App.4th 720, the court determined that "we must differentiate between adverse impacts upon particular persons and adverse impacts upon the environment of persons in general. As recognized by the court in *Topanga Beach Renters Assn. v. Department of General Services* (1976) 58 Cal.App.3d 188: '[A]ll government activity has some direct or indirect adverse effect on some persons. The issue is not whether [the project] will adversely affect particular persons but whether [the project]

[4] California Department of Transportation. *Scenic Highways*. Available at: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. Accessed June 2020.

will adversely affect the environment of persons in general.'" Therefore, the focus in this section is on potential impacts to public views.

Public views in the project vicinity would consist primarily of views seen by motorists traveling on Marsh Creek Road and motorists, bicyclists, and pedestrians traveling on local roadways to the south of the project site, including Diablo Parkway. The proposed project would convert a portion of the undeveloped project site to a residential use, and, thus, would alter the existing visual character of the site. However, the project is consistent with the type, location, and intensity of the proposed residential development that has been anticipated in the *Marsh Creek Road Specific Plan*. In addition, consistent with Policy DD-2d of the Marsh Creek Road Specific Plan, the proposed residential structures would be set back 80 feet from the Marsh Creek Road right-of-way. This would help to maintain a view corridor along Marsh Creek Road through the project vicinity. The project also includes landscaping along the project's Marsh Creek Road frontage, and along each residential lot, in an effort to help screen the on-site structures from view. Specifically, a 24-foot landscape corridor would be provided along the Marsh Creek Road frontage and would include various types of trees, shrubs, and ground cover such as 24-inch-box trees and one-gallon and five-gallon shrubs. Importantly, the upslope portions of the residential lots would be maintained as open space, thus, preserving views of the hills from Marsh Creek Road.

All development occurring on the project site would be subject to the City's Development Plan Review Permit consistent with Chapter 17.28.050 set forth in the Clayton Municipal Code. The Development Plan Review process would include a review of the exterior appearance of all proposed facilities and structures to ensure compliance with the City's established General Plan and Marsh Creek Road Specific Plan policies.

Given the fact that: 1) the Marsh Creek Road Specific Plan and General Plan anticipate low density residential development for the project site, generally consistent with what is being proposed, 2) the project includes the preservation of the upslope portions of the project site as private open space, and 3) the project will adhere to the Development Plan Review requirements and other applicable policies set forth in the *Marsh Creek Road Specific Plan*, such as the 80-foot structure setback from Marsh Creek Road, the proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings, and a ***less-than-significant*** impact would occur.

d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? ..... Less-Than-Significant Impact

Discussion (d.)

The proposed project site is currently vacant and undeveloped. As such, development of the project site with six single-family residences, a street, and various other associated improvements would introduce new sources of light and/or glare to the site where none currently exist. Potential sources of nighttime light would include, but not be limited to, lighting spilling from the interiors of the proposed residences, exterior light fixtures, street

lighting on the new on-site roadway, and headlights from vehicles. Sources of glare could include windows on the proposed residential structures, as well as any other reflective surfaces.

The project would be required to comply with the Section 8.09 of the City's Municipal Code, which prohibits the installation or maintenance of outdoor light fixtures that would cause an undue annoyance to persons on neighboring parcels in residential zoning districts. In addition, the nearest sensitive viewers are located approximately 100 feet south of the project site across Marsh Creek Road, and, thus, nighttime light from the project site would not have a substantial adverse effect on such viewers, especially given the proposed intervening landscaping.

Based on the above, the proposed project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area, and a ***less-than-significant*** impact would occur.

2. AGRICULTURE RESOURCES.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:					
a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping Program of the California Resources Agency, to non-agricultural use?	□	□	□	X
b.	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	□	□	□	X
c.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	□	□	□	X
d.	Result in the loss of forest land or conversion of forest land to non-forest use?	□	□	□	X
e.	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	□	□	□	X

a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use? ..... No Impact

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract? ..... No Impact

Discussion (a. and b.)

According to the California Department of Conservation Farmland Mapping and Monitoring Program, the proposed project site is classified as Grazing Land.[5] The site does not contain Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, and, thus, the project would not convert such lands to non-agricultural use. Conflicts with existing zoning for agricultural use or a Williamson Act contract would not occur. As such, the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural uses and would not conflict with existing zoning for agricultural use, or a Williamson Act contract. Thus, ***no impact*** would occur as a result of the proposed project.

[5] California Department of Conservation. *Contra Costa County Important Farmland 2016.* Published August 2018.

c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? ..... No Impact

d. Result in the loss of forest land or conversion of forest land to non-forest use? ..... No Impact

Discussion (c. and d.)

The project site is not considered forest land (as defined in Public Resources Code section 12220[g]) or timberland (as defined by Public Resources Code section 4526), and the site is not zoned Timberland Production (as defined by Government Code section 51104[g]). Therefore, the proposed project would have ***no impact*** with regard to conversion of forest land or any potential conflict with forest land, timberland, or Timberland Production zoning.

e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? ..... No Impact

Discussion (e.)

The project site is located within the City of Clayton, and is located near existing residential development. Agricultural activities do not currently occur on the site, nor do they occur in any areas adjacent to or near the project site. Therefore, constructing six new residences on the southeastern portion of the project site would not result in conflicts between existing agricultural activities and the proposed residential land uses, which could impair existing agricultural operations or lead to induced conversion of agricultural lands due to incompatible uses. Therefore, the proposed project would not involve other changes in the existing environment, due to their location or nature, that could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use and, thus, ***no impact*** would occur.

3. AIR QUALITY.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:					
a.	Conflict with or obstruct implementation of the applicable air quality plan?	□	□	X	□
b.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	□	□	X	□
c.	Expose sensitive receptors to substantial pollutant concentrations?	□	□	X	□
d.	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	□	□	X	□

a. Would the project conflict with or obstruct implementation of the applicable air quality plan? ..... Less-Than-Significant Impact

b. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? ..... Less-Than-Significant Impact

Discussion (a. and b.)

The City of Clayton is located in the San Francisco Bay Area Air Basin (SFBAAB), which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The SFBAAB area is currently designated as a nonattainment area for State and federal ozone, State and federal fine particulate matter 2.5 microns in diameter ($PM_{2.5}$), and State respirable particulate matter 10 microns in diameter (PM_{10}) ambient air quality standards (AAQS). The SFBAAB is designated attainment or unclassified for all other AAQS. It should be noted that on January 9, 2013, the U.S. Environmental Protection Agency (USEPA) issued a final rule to determine that the Bay Area has attained the 24-hour $PM_{2.5}$ federal AAQS. Nonetheless, the Bay Area must continue to be designated as nonattainment for the federal $PM_{2.5}$ AAQS until such time as the BAAQMD submits a redesignation request and a maintenance plan to the USEPA, and the USEPA approves the proposed redesignation. The USEPA has not yet approved a request for redesignation of the SFBAAB; therefore, the SFBAAB remains in nonattainment for 24-hour $PM_{2.5}$.

In compliance with regulations, due to the nonattainment designations of the area, the BAAQMD periodically prepares and updates air quality plans that provide emission reduction strategies to achieve attainment of the AAQS, including control strategies to reduce air pollutant emissions through regulations, incentive programs, public education, and partnerships with other agencies. The current air quality plans are prepared in cooperation with the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG).

The most recent federal ozone plan is the 2001 Ozone Attainment Plan, which was adopted on October 24, 2001 and approved by the California Air Resources Board (CARB) on November 1, 2001. The plan was submitted to the USEPA on November 30, 2001 for review and approval. The most recent State ozone plan is the 2017 Clean Air Plan (CAP), adopted on April 19, 2017. The 2017 CAP was developed as a multi-pollutant plan that provides an integrated control strategy to reduce ozone, PM, toxic air contaminants (TACs), and greenhouse gases (GHGs). Although a plan for achieving the State PM_{10} standard is not required, the BAAQMD has prioritized measures to reduce PM in developing the control strategy for the 2017 CAP. The control strategy serves as the backbone of the BAAQMD's current PM control program.

The aforementioned air quality plans contain mobile source controls, stationary source controls, and transportation control measures to be implemented in the region to attain the State and federal AAQS within the SFBAAB. Adopted BAAQMD rules and regulations, as well as the thresholds of significance, have been developed with the intent to ensure continued attainment of AAQS, or to work towards attainment of AAQS for which the area is currently designated nonattainment, consistent with applicable air quality plans. For development projects, BAAQMD establishes significance thresholds for emissions of the ozone precursors reactive organic gases (ROG) and oxides of nitrogen (NO_X), as well as for PM_{10} and $PM_{2.5}$, expressed in pounds per day (lbs/day) and tons per year (tons/yr). The thresholds are listed in Table 1. Thus, by exceeding the BAAQMD's mass emission thresholds for operational emissions of ROG, NO_X, PM_{10}, or $PM_{2.5}$, a project would be considered to conflict with or obstruct implementation of the BAAQMD's air quality planning efforts.

Table 1
BAAQMD Thresholds of Significance

	Construction	Operational	
Pollutant	**Average Daily Emissions (lbs/day)**	**Average Daily Emissions (lbs/day)**	**Maximum Annual Emissions (tons/year)**
ROG	54	54	10
NO_x	54	54	10
PM_{10} (exhaust)	82	82	15
$PM_{2.5}$ (exhaust)	54	54	10

Source: BAAQMD, CEQA Guidelines, May 2017.

The proposed project's construction and operational emissions were quantified using the California Emissions Estimator Model (CalEEMod) software version 2016.3.2 - a Statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including GHG emissions, from land use projects. The model applies inherent default values for various land uses, including construction data, vehicle mix, trip length, average speed, etc. Where project-specific information is available, such information is applied in the model. The proposed project's modeling assumed the following:

- The modeled land use consists of: six single-family residential units totaling 30,306 sf on 9.03 acres of land;
- Construction would begin in April of 2021 and occur over approximately one year;
- A total of 4.3 acres of land would be disturbed during grading and import or export of material is not anticipated to be required;

- The trip generation rate was set to 9.52 trips/unit, based on the ITE 9th edition trip generation rate for Single Family Homes (210);
- Six natural gas fireplaces would be installed;
- The project would improve connectivity of the local pedestrian network; and
- The project would comply with all applicable provisions of the 2019 CBSC, including installation of water efficient fixtures and generation of 100 percent of electricity on-site from renewable sources.

The proposed project's estimated emissions associated with construction and operations and the project's contribution to cumulative air quality conditions are provided below. All CalEEMod results are included as Appendix A to this IS/MND.

Construction Emissions

According to the CalEEMod results, the proposed project would result in maximum unmitigated construction criteria air pollutant emissions as shown in Table 2. As shown in the table, the proposed project's construction emissions would be below the applicable thresholds of significance for ROG, NO_X, PM_{10}, and $PM_{2.5}$.

Table 2
Maximum Construction Emissions (lbs/day)

Pollutant	Proposed Project Emissions	Threshold of Significance	Exceeds Threshold?
ROG	6.65	54	**NO**
NO_X	43.84	54	**NO**
PM_{10} (exhaust)	2.21	82	**NO**
PM_{10} (fugitive)	18.21	None	**N/A**
$PM_{2.5}$ (exhaust)	2.06	54	**NO**
$PM_{2.5}$ (fugitive)	9.97	None	**N/A**

Source: CalEEMod, June 2020 (see Appendix A)

Although thresholds of significance for mass emissions of fugitive dust PM_{10} and $PM_{2.5}$ have not been identified by BAAQMD, the proposed project's estimated fugitive dust emissions have been included for informational purposes. All projects within the jurisdiction of the BAAQMD are required to implement all of the BAAQMD's Basic Construction Mitigation Measures, which include the following:

1. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
2. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
3. All vehicle speeds on unpaved roads shall be limited to 15 mph.
4. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
5. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of

Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

6. All construction equipment shall be maintained and properly tuned in accordance with manufacturers specifications. All equipment shall be checked by a certified visible emissions evaluator.
7. Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

The proposed project's implementation of the BAAQMD's Basic Construction Mitigation Measures would further minimize construction-related emissions.

Because the proposed project would be below the applicable thresholds of significance for construction emissions, project construction would not result in a significant air quality impact.

Operational Emissions

According to the CalEEMod results, the proposed project would result in maximum unmitigated operational criteria air pollutant emissions as shown in Table 3. As shown in the table, the proposed project's operational emissions would be below the applicable thresholds of significance.

Table 3
Unmitigated Maximum Operational Emissions

Pollutant	Proposed Project Emissions		Threshold of Significance		Exceeds Threshold?
	lbs/day	tons/yr	lbs/day	tons/yr	
ROG	0.88	0.16	54	10	**NO**
NO_X	0.46	0.07	54	10	**NO**
PM_{10} (exhaust)	0.02	0.004	82	15	**NO**
PM_{10} (fugitive)	0.27	0.05	None	None	**N/A**
$PM_{2.5}$ (exhaust)	0.02	0.004	54	10	**NO**
$PM_{2.5}$ (fugitive)	0.07	0.01	None	None	**N/A**

Source: CalEEMod, June 2020 (see Appendix A)

Because the proposed project's operational emissions would be below the applicable thresholds of significance, the proposed project would be considered to result in a less-than-significant air quality impact during operations.

Cumulative Emissions

Past, present and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By nature, air pollution is largely a cumulative impact. A single project is not sufficient in size to, by itself, result in nonattainment of AAQS. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant. In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. The thresholds of significance presented in Table 1 represent the levels at which a project's individual

emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the SFBAAB's existing air quality conditions. If a project exceeds the significance thresholds presented in Table 1, the proposed project's emissions would be cumulatively considerable, resulting in significant adverse cumulative air quality impacts to the region's existing air quality conditions. Because the proposed project would result in emissions below the applicable thresholds of significance, the project would not be expected to result in a cumulatively considerable contribution to the region's existing air quality conditions.

Conclusion

As stated previously, the applicable regional air quality plans include the 2001 Ozone Attainment Plan and the 2017 CAP. According to BAAQMD, if a project would not result in significant and unavoidable air quality impacts, after the application of all feasible mitigation, the project may be considered consistent with the air quality plans. Because the proposed project would result in emissions below the applicable thresholds of significance, the project would not be considered to conflict with or obstruct implementation of regional air quality plans.

Because the proposed project would not conflict with or obstruct implementation of the applicable air quality plans, violate any air quality standards or contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase in any criteria air pollutant, impacts would be considered ***less than significant***.

c. Would the project expose sensitive receptors to substantial pollutant concentrations? ..... Less-Than-Significant Impact

Discussion (c.)

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, childcare centers, playgrounds, retirement homes, convalescent homes, hospitals, and medical clinics. The nearest existing sensitive receptors to the site would be the single-family residences surrounding the project site.

The major pollutant concentrations of concern are localized carbon monoxide (CO) emissions and toxic air contaminants (TAC) emissions, which are addressed in further detail below.

Localized CO Emissions

Localized concentrations of CO are related to the levels of traffic and congestion along streets and at intersections. High levels of localized CO concentrations are only expected where background levels are high, and traffic volumes and congestion levels are high. Emissions of CO are of potential concern, as the pollutant is a toxic gas that results from the incomplete combustion of carbon-containing fuels such as gasoline or wood. CO emissions are particularly related to traffic levels.

In order to provide a conservative indication of whether a project would result in localized CO emissions that would exceed the applicable threshold of significance, the BAAQMD has established screening criteria for localized CO emissions. According to BAAQMD, a proposed project would result in a less-than-significant impact related to localized CO emission concentrations if all of the following conditions are true for the project:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans;
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; and
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, underpass, etc.).

According to the Contra Costa Transportation Authority (CCTA) Congestion Management Plan (CMP), any land development application generating less than 100 peak hour trips is not required to prepare a study of its traffic impacts on the CMP network as such projects are expected to have minimal impacts on the CMP network.[6] As discussed in further detail in Section 17, Transportation, of this IS/MND, the proposed project would result in an estimated 57 new daily vehicle trips, with five new AM and six new PM peak hour vehicle trips. Because the project is anticipated to only generate 11 total peak hour trips per day, the project would be well below the CCTA CMP threshold of 100 new peak hour trips, and would thus be considered to be consistent with the CCTA CMP.

As discussed above, the project is not expected to generate a significant increase in peak hour trips. The proposed residences are anticipated to generate approximately 57 trips per day, which would contribute a nominal increase in local traffic levels, and would not increase traffic volumes at any intersection to more than 44,000 vehicles per hour. As such, the proposed project's increase of 11 new peak hour trips would not increase traffic volumes at nearby intersections to more than the hourly traffic volumes set forth in the BAAQMD's localized CO screening criteria. Furthermore, intersections where vertical and/or horizontal mixing is limited are not located in the project vicinity.

Based on the above, per the BAAQMD's screening criteria for localized CO emissions, the proposed project would not be expected to result in substantial levels of localized CO at surrounding intersections or generate localized concentrations of CO that would exceed standards or cause health hazards.

TAC Emissions

Another category of environmental concern is TACs. The CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) provides recommended setback distances for sensitive land uses from major sources of TACs, including, but not limited to, freeways and high traffic roads, distribution centers, and rail yards. The CARB has identified diesel particulate matter (DPM) from diesel-fueled engines as a TAC; thus,

[6] Contra Costa Transportation Authority. *2019 Update of the Contra Costa Congestion Management Program* [pg. 72]. Adopted December 18, 2019.

high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Health risks associated with TACs are a function of both the concentration of emissions and the duration of exposure, where the higher the concentration and/or the longer the period of time that a sensitive receptor is exposed to pollutant concentrations would correlate to a higher health risk. The nearest sensitive receptors to the proposed project are single-family residences located approximately 100 feet to the south of the proposed project site across Marsh Creek Road.

The proposed project does not include any operations that would be considered a substantial source of TACs. Accordingly, operations of the proposed project would not expose sensitive receptors to excess concentrations of TACs.

Short-term, construction-related activities could result in the generation of TACs, specifically DPM, from on-road haul trucks and off-road equipment exhaust emissions. However, construction is temporary and occurs over a relatively short duration in comparison to the operational lifetime of the proposed project. Specifically, as noted above, construction would occur over an approximately one-year period. The exposure period typically analyzed in health risk assessments is 30 years or greater, which is substantially longer than the estimated one-year construction period associated with the proposed project. In addition, all construction equipment and operation thereof would be regulated by the In-Use Off-Road Diesel Vehicle Regulation, which is intended to help reduce emissions associated with off-road diesel vehicles and equipment, including DPM. Project construction would also be required to comply with all applicable BAAQMD rules and regulations, particularly associated with permitting of air pollutant sources. In addition, per the City of Clayton Municipal Code Section 15.01.101, construction activities would be limited to daytime hours only.

During construction, only portions of the project site would be disturbed at a time. Operation of construction equipment would occur on portions of the site intermittently throughout the course of a day over the overall construction period. Because construction equipment on-site would not operate for any long periods of time and would be used at varying locations within the site, associated emissions of DPM would not occur at the same location (or be evenly spread throughout the entire project site) for long periods of time. Due to the temporary nature of construction and the relatively short duration of potential exposure to associated emissions, sensitive receptors in the area would not be exposed to pollutants for a permanent or substantially extended period of time. Furthermore, any one nearby sensitive receptor would be exposed to varying concentrations of DPM emissions throughout the construction period. According to BAAQMD, research conducted by CARB indicates that DPM is highly dispersive in the atmosphere. Thus, emissions at the project site would be substantially dispersed at the nearest sensitive receptors.

Considering the short-term nature of construction activities, the regulated and intermittent nature of the operation of construction equipment, and the highly dispersive nature of DPM, the likelihood that any one sensitive receptor would be exposed to high concentrations of DPM for any extended period of time would be low. For the aforementioned reasons, project construction would not be expected to expose sensitive receptors to substantial pollutant concentrations.

Conclusion

Based on the above discussion, the proposed project would not expose any sensitive receptors to substantial concentrations of localized CO or TACs from construction or operation. Therefore, the proposed project would result in a ***less-than-significant*** impact related to the exposure of sensitive receptors to substantial pollutant concentrations.

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? ..... Less-Than-Significant Impact

Discussion (d.)

Emissions such as those leading to odors have the potential to adversely affect sensitive receptors within the project area. Pollutants of principal concern include emissions leading to odors, emission of dust, or emissions considered to constitute air pollutants. Air pollutants have been discussed in sections "a" through "c" above. Therefore, the following discussion focuses on emissions of odors and dust.

Pursuant to the BAAQMD CEQA Guidelines, odors are generally regarded as an annoyance rather than a health hazard.[7] Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The presence of an odor impact is dependent on several variables including: the nature of the odor source; the frequency of odor generation; the intensity of odor; the distance of odor source to sensitive receptors; wind direction; and sensitivity of the receptor.

Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, quantification of significant odor impacts is relatively difficult. Typical odor-generating land uses include, but are not limited to, wastewater treatment plants, landfills, and composting facilities. The proposed project would not introduce any such land uses.

Construction activities often include diesel-fueled equipment and heavy-duty diesel trucks, which can create odors associated with diesel fumes, which could be found to be objectionable. However, as discussed above, construction activities would be temporary, and operation of construction equipment would be regulated and intermittent. Project construction would also be required to comply with all applicable BAAQMD rules and regulations, particularly associated with permitting of air pollutant sources. The aforementioned regulations would help to minimize air pollutant emissions as well as any associated odors. Accordingly, substantial objectionable odors would not occur during construction activities or affect a substantial number of people.

In addition, the BAAQMD rules and regulations would act to reduce construction-related dust, which would ensure that construction of the proposed project does not result in substantial emissions of dust. Following project construction, the project site would not

[7] Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines* [pg. 7-1]. May 2017.

include any exposed topsoil. Thus, project operations would not include any substantial sources of dust.

For the aforementioned reasons, construction and operation of the proposed project would not result in emissions (such as those leading to odors) adversely affecting a substantial number of people, and a ***less-than-significant*** impact would result.

4. BIOLOGICAL RESOURCES.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	□	X	□	□
b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	□	X		□
c.	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	□	X		□
d.	Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	□	□	X	□
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	□	X	□	□
f.	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?	□	□	X	□

a. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? ..... Less-Than-Significant With Mitigation Incorporated

Discussion (a.)

This section is based upon a Planning Survey Report (PSR) prepared for the project site in order to comply with and receive Permit coverage under the East Contra Costa County Habitat Conservation Plan (ECCCHCP),[8] as well as a Biological Resources Assessment[9]

[8] Swaim Biological, Inc. *Application Form and Planning Survey Report, Oak Creek Canyon Development*. July 2015.

[9] Swaim Biological, Inc. *Biological Resources Assessment for the Oak Creek Canyon Residential Development, Contra Costa County, California.* May 2018.

(BRA) and Rare Plant Survey Report[10] prepared for the proposed project by Swaim Biological, Inc. (see Appendix B).

The following discussion describes the sensitive biological resources that have the potential to be present within the project site based on the BRA and Rare Plant Survey Report. Sensitive biological resources include habitats and/or individual plant and animal species that have special recognition by federal, State, or local conservation agencies. For purposes of this analysis, special-status animal species are defined as animals protected under the California and Federal Endangered Species Acts (CESA and FESA, respectively), or other regulations, and species that are considered rare by the scientific community. Special-status plant species are defined as plants that are protected under the CESA and FESA or listed as rare by California Department of Fish and Wildlife (CDFW) and the California Native Plant Society (CNPS). Special-status species include:

- Animals and plants listed or proposed for listing as threatened or endangered under the CESA (Fish and Game Code §2050 et seq.; 14 CCR §670.1et seq.) or the FESA (50 CFR 17.11);
- Animals and plants that are candidates for possible future listing as threatened or endangered under the FESA (50 CFR 17; FR Vol. 64, No. 205, pages 57533-57547, October 25, 1999); and under the CESA (California Fish and Game Code §2068);
- Animals that meet the definition of endangered, rare, or threatened under the California Environmental Quality Act (CEQA) (14 CCR §15380) that may include species not found on either State or Federal Endangered Species lists;
- Animals that are designated as "species of special concern" by CDFW (2016);
- Animal species that are designated as “fully protected” under California (Fish and Game Code 3511, 4700, 5050, and 5515);
- Animal species that are designated as “covered” species under the ECCHCP/NCCP
- Bat Species that are designated on the Western Bat Working Group’s (WBWG) Regional Bat Species Priority Matrix as: “Red or High.” These species are considered to be “imperiled or are at high risk of imperilment”;
- Plants that are listed by CNPS Rare Plant Program as rank 1A – plants presumed extirpated in California and either rare or extinct elsewhere, 1B – plants rare, threatened or endangered in California or elsewhere, 2A – plants presumed extirpated in California but common elsewhere, 2B – plants rare, threatened or endangered in California by common elsewhere, 3 – plants about which more is needed and 4 – plants of limited distribution; and
- Plants that are listed by the ECCHCP/NCCP as “covered” or “no take” species.

In addition to regulations for special-status species, most birds in the United States, including non-status species, are protected by the Migratory Bird Treaty Act (MBTA) of 1918. Under the MBTA, destroying active nests, eggs, and young is illegal. The presence of species with legal protection under the Endangered Species Act often represents a major constraint to development, particularly when the species are wide-ranging or highly sensitive to habitat disturbance and where proposed development would result in a take of these species.

[10] Swaim Biological, Inc. *Rare Plant Survey Report for the Oak Creek Canyon Residential Development, Contra Costa County, California.* October 2018.

The project site is located within the boundaries of the *East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan* (ECCCHCP/NCCP), which is intended to provide an effective framework to protect natural resources in the County. The project site is located within Zone 2 of the Fee Payment Zones designated in the ECCCHCP/NCCP. As per the Fee Payment Zones, the proposed project would be subject to payment of all applicable fees prior to construction of the project. According to the PSR, the project site consists of approximately 6.57 acres of annual grassland land cover and 2.46 acres of ruderal land cover. In addition, the Rare Plant Survey Report identified oak woodland northwest of the project site, near the existing water storage tank. Visual reconnaissance surveys of the project area were conducted by biologist Leslie Koenig on October 5, 2017 and May 9, 2018. During the field survey the biologist walked the entire project site in meandering transects to evaluate biological resource conditions at the site. At the time of the field survey, the southern portion of the project site had been recently disked and, thus, ground cover was not present. Two black locust trees and one Mexican fan palm tree were noted within the project site along the southern site boundary during the survey. In addition, various trees and shrubs are located along the northern site boundary.

As part of the BRA and Rare Plant Survey Report prepared for the project, the California Natural Diversity Database (CNDDB) was used to determine what special-status species are known to have occurred within the nine USGS 7.5-minute quadrangles in the project area. A total of 28 special-status wildlife species and 54 special-status plant species were identified through the literature review and database queries as having been sighted in the project region. Of the special-status species occurrences noted, one wildlife species and six plant species were determined to have a moderate potential to occur within the project site based on habitat requirements. In addition, the BRA noted that birds protected under the MBTA could occur within existing trees in the project area. Such species are discussed in further detail below.

Special-Status Wildlife

The following discussions summarize the potential for the proposed project to result in adverse effects to western burrowing owl and birds protected by the MBTA.

Western Burrowing Owl

The western burrowing owl is designated by CDFW as a Species of Special Concern. Burrowing owls are found in open arid and semiarid habitats with short or sparse vegetation, including grasslands, deserts, agricultural fields, ruderal areas and open, landscaped areas. The species is dependent on mammals such as the California ground squirrel that dig underground burrows, which the owls occupy. Some burrowing owls have adapted to urban landscapes, and in some instances, open lots, roadsides, and landscaped areas can provide suitable habitat. Breeding typically occurs from March to August but can begin as early as February and can last into December.

The proposed project site is located within the ECCHCP/NCCP modeled suitable habitat for the western burrowing owl. The two nearest CNDDB observations are both 4.8 miles away and are from 1989 and 1991, respectively. The project site contains a mix of annual grassland and disturbed grassland which provides potential suitable breeding and foraging habitat for the owl. California ground squirrel burrows were observed during surveys;

however, burrows of suitable size to support the species (four inches or greater in diameter) were not observed during field surveys conducted on the parcel within 500 feet of the project site. Nonetheless, given that the site contains suitable California ground squirrel habitat, construction activities associated with the proposed project could result in adverse impacts to the species.

Birds Protected by the MBTA

Per the BRA, the three trees present on the proposed project site could serve as nesting locations for common and sensitive passerine and raptor species protected under the MBTA. Site construction activities, including tree removal during the active nesting season (February 1 to August 31) would have the potential to cause the failure or abandonment of active nests of migratory birds. Impacts to nesting birds, their eggs, and/or young caused by implementation of the project would be regarded as a potentially significant impact.

Special-Status Plants

The Rare Plant Survey Report indicates that the following six special-status plant species have a moderate potential to occur on-site, based upon detailed background research, including the CNDDB, California Native Plant Society's Online Inventory of Rare and Endangered Plants, and the botanical list compiled for ECCCHCP/NCCP Planning Survey Report Form, Table 2b for projects occurring in annual grassland settings. The six special-status plant species that have a moderate potential to occur on-site include large-flowered fiddleneck (*Amsinckia grandiflora,* ECCHCP No Take species), big tarplant (*Blepharizonia plumosa*, ECCHCP Covered species), round-leaved filaree (*California macrophylla*, ECC HCP Covered species), Mt. Diablo fairy lantern (*Calochortus pulchellus,* ECCHCP Covered species), diamond-petaled California poppy (*Eschscholzia rhombipetala*, ECCHCP No Take species), and showy golden madia (*Madia radiata*, ECCHCP Covered species).

Four rounds of floristic surveys were determined appropriate to encompass the blooming periods of target species, and thus a single survey was conducted each month in April, June August, and early October 2018. No special-status plants were observed during 2018 surveys.

Although special-status plants were not identified within the project area during field surveys in 2018, the USFWS only considers plant surveys to be valid for three years. Should project construction not occur within three years from the date of the survey, construction activity could impact special-status plant species that may have colonized the project site. Therefore, impacts related to the disturbance of special-status plant species could be significant.

Conclusion

Based on the above, in the absence of appropriate mitigation, construction activities associated with the proposed project could result in adverse effects to western burrowing owl, birds protected by the MBTA, and special-status plant species should they colonize the site prior to construction. Thus, a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above potential impacts to a *less-than-significant* level.

Mitigation Measure 1. *Prior to any ground disturbance related to covered activities, a U SFWS/CDFW-approved biologist shall conduct a preconstruction survey in areas identified in the planning surveys as having potential burrowing owl habitat. The surveys shall establish the presence or absence of western burrowing owl and/or habitat features and evaluate use by owls in accordance with CDFW survey guidelines (California Department of Fish and Game 1995).*

On the parcel where the activity is proposed, the biologist shall survey the proposed disturbance footprint and a 500-foot radius from the perimeter of the proposed footprint to identify burrows and owls. Adjacent parcels under different land ownership shall not be surveyed. Surveys shall take place near sunrise or sunset in accordance with CDFW guidelines. All burrows or burrowing owls shall be identified and mapped. Surveys shall take place no more than 30 days prior to construction. During the breeding season (February 1 to August 31), surveys shall document whether burrowing owls are nesting in or directly adjacent to disturbance areas. During the nonbreeding season (September 1 to January 31), surveys shall document whether burrowing owls are using habitat in or directly adjacent to any disturbance area. Survey results shall be valid only for the season (breeding or nonbreeding) during which the survey is conducted.

If burrowing owls are found during the breeding season (February 1 to August 31), the project proponent shall avoid all nest sites that could be disturbed by project construction during the remainder of the breeding season or while the nest is occupied by adults or young. Avoidance shall include establishment of a non-disturbance buffer zone (described below). Construction may occur during the breeding season if a qualified biologist monitors the nest and determines that the birds have not begun egg-laying and incubation or that the juveniles from the occupied burrows have fledged. During the nonbreeding season (September 1 to January 31), the project proponent should avoid the owls and the burrows they are using, if possible. Avoidance shall include the establishment of a buffer zone (described below).

During the breeding season, buffer zones of at least 250 feet in which no construction activities can occur shall be established around each occupied burrow (nest site). Buffer zones of 160 feet shall be established around each burrow

being used during the nonbreeding season. The buffers shall be delineated by highly visible, temporary construction fencing.

If occupied burrows for burrowing owls are not avoided, passive relocation shall be implemented. Owls should be excluded from burrows in the immediate impact zone and within a 160-foot buffer zone by installing one-way doors in burrow entrances. These doors should be in place for 48 hours prior to excavation. The project area should be monitored daily for 1 week to confirm that the owl has abandoned the burrow. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation (California Department of Fish and Game 1995). Plastic tubing or a similar structure should be inserted in the tunnels during excavation to maintain an escape route for any owls inside the burrow.

Mitigation Measure 2. *If work is scheduled to take place between February 1 and August 31, a pre-construction nesting bird survey shall be conducted by a qualified biologist within 14 days of construction, covering a radius of 250 feet for non-listed raptors and 100 feet for non-listed passerines at all locations. The findings of the survey shall be submitted to the Community Development Department. If an active bird nest is found within these buffers, species-specific measures shall be prepared by a qualified biologist and implemented to prevent abandonment of the active nest. At a minimum, grading in the vicinity of a nest shall be postponed until the young birds have fledged. If an active nest is present, a minimum exclusion buffer of 100 feet shall be maintained during construction, depending on the species and location. The perimeter of the nest setback zone shall be fenced or adequately demarcated with stakes and flagging at 20-foot intervals, and construction personnel and activities restricted from the area. A survey report by a qualified biologist verifying that no active nests are present, or that the young have fledged, shall be submitted prior to initiation of grading in the nest-setback zone. The qualified biologist shall serve as a biological monitor during those periods when construction activities occur near active nest areas to ensure that no inadvertent impacts on these nests occur.*

Mitigation Measure 3. *Protocol-level special-status plant surveys were conducted within the project area in April, June, August and October of 2018, and no special-status plant species were identified. Survey results are valid for three years. If construction does not commence before Spring of 2021, then new focused plant surveys shall be performed according to CDFW and CNPS protocol, as generally described below. Surveys for rare*

plant species shall be conducted using approved CDFW/USFWS methods during the appropriate season for identification of large flowered fiddleneck, big tarplant, round-leaved filaree, Mt. Diablo fairy lantern, diamond-petaled poppy, and showy golden madia. The blooming periods for each species is described in the Biological Resources Assessment prepared for the proposed project by Swaim Biological, Inc.

If during surveys ECCHCP/NCCP covered or no take species are found, the location, extent and condition of all occurrences shall be documented in a survey report and submitted to the City of Clayton. CNDDB California Native Species Field Survey Forms for all covered or no-take plants encountered on the site shall also be completed and submitted to the City of Clayton and CNDDB.

Results of surveys shall inform project design. In order to comply with the ECCHCP/NCCP, construction activities shall avoid all impacts on extremely rare no take species and shall implement plant salvage when impacted covered plant species are unavoidable. Conservation measures described in the ECCHCP/NCCP shall be adhered to. If a rare plant is found that is not covered by the ECCHCP/NCCP, appropriate conservation measures similar to those required by the ECCHCP/NCCP shall be developed on a plant by plant basis and in accordance with CDFW and CNPS.

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service? ..... Less-Than-Significant With Mitigation Incorporated

c. Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?..... Less-Than-Significant With Mitigation Incorporated

Discussion (b. and c.)

Per the USGS 7.5-minute quadrangle for the project area, an intermittent blue-line stream traverses the lower elevations of the proposed project site.[11] In addition, the National Wetland Inventory map of the project site shows a riverine wetland type drainage following a similar alignment to the blue-line stream mapped on the USGS quadrangle. Presence of such an aquatic feature within the project site is supported by historical aerial photography, as well as the Aquatic Resources Inventory contained in Appendix J of the ECCHCP/NCCP. As noted in Section 9, Hydrology, of this IS/MND, the proposed project would include construction of a 48-inch diameter underground storm drain pipe to reroute the drainage through the project site.

It should be noted that visual evidence of the drainage has been obscured by past site disturbance, including recent disking. However, several indicators suggest that considerable surface water flows across the site in the vicinity of the mapped drainage alignment, and that without the routine disturbance from disking, a natural drainage with a bed and bank could form within the site. On the upstream end of the mapped drainage alignment, flood debris is entangled in several locations on the lower strands of the barbed wire fence separating the site from the adjacent property, reaching a depth of up to 10 inches in height, indicating considerable surface flows during storm events. Noted flood debris includes dense mats of grass and other foliage, smaller sticks, and branches. Outside of the site boundaries along the Marsh Creek Road frontage, concrete rubble has been installed onto an incised erosion channel where the slope drops down into the four-foot wide corrugated metal pipe. The pipe conveys surface flows under the roadway and eventually discharges into Mount Diablo Creek.

The U.S. Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual and the 2008 Regional Supplement for the Arid West Region provide guidance for conducting wetland delineations and determining the possible limits of their jurisdiction under the federal Clean Water Act. These include methodologies for evaluating the three criteria used by the Corps in determining the presence or absence of regulated waters – hydrology, soils, and vegetation. Typically, all three of the criteria must be met for an area to meet the USACE definition of regulated wetlands under "normal conditions". The qualifier of "normal conditions" was included in the definition of wetlands to reflect the fact that specific instances exist in which the vegetation or other criteria have been inadvertently or purposely removed or altered as a result of recent natural events or human activities. When such activities occur, an area may fail to meet the diagnostic criteria for a wetland but does not disqualify the area from possible USACE regulation. The 1987 Wetland Delineation Manual and Chapter 5 of the 2008 Regional Supplement for the Arid West Region provide guidance for making wetland determinations in difficult-to-identify wetland situations. Such guidance typically involves more robust analysis as part of the wetland delineation process and can include cessation of the human disturbance that could be influencing vegetation, hydrology, and soil conditions.

Without a formal wetland delineation verified by the Corps, the potential for jurisdictional waters (either wetlands or other waters) remains unresolved because of the atypical conditions from the routine disking of the lower elevations of the site. Mapping data and

[11] Environmental Collaborative. *Peer Review of Planning Survey Report, Oak Creek Canyon Updated CEQA Review, Clayton, California*. February 8, 2018.

evidence observed in the field indicates that concentrated surface flows reach and leave the site in the vicinity of the mapped drainage alignment. Such information provides an indication that jurisdictional waters may be present on the site, and that a determination by the USACE as part of the wetland delineation verification process for atypical conditions is warranted.

In the event that the on-site drainage feature is determined to be under the jurisdiction of the USACE, the project applicant would be required to obtain permits from regulatory agencies for construction activities associated with the channel (Section 404 Clean Water Act Nationwide permit, Section 401 Water Quality Certification, and Section 1600 Lake and Streambed Alteration Agreement). It should be noted that construction of the proposed 48-inch storm drain pipe would be limited to the project site and would not include any construction work within the portion of the existing drainage channel located in unincorporated Contra Costa County to the east of the site. As such, issuance of a Contra Costa County Drainage Permit from the Contra Costa County Flood Control & Water Conservation District would not be required.

Based on the above, the proposed project could result in a ***potentially significant*** impact related to having a substantial adverse effect on a state or federally protected wetlands (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above potential impact to a *less-than-significant* level.

Mitigation Measure 4. *Prior to approval of grading plans for the proposed project, the project applicant shall complete a formal wetland delineation and submit the delineation to the U.S. Army Corps of Engineers (USACE) for verification.*

In the event that the proposed project site is determined to include jurisdictional wetlands that would be altered as part of the proposed development, a Section 404 permit for fill of jurisdictional wetlands shall be acquired, and mitigation for impacts to jurisdictional waters that cannot be avoided shall conform with the USACE "no-net-loss" policy prior to approval of grading plans. To the extent feasible, however, the project shall be designed to avoid and minimize adverse effects to waters of the U.S. or jurisdictional waters of the State of California within the project area. Mitigation for impacts to both federal and State jurisdictional waters shall be addressed using these guidelines.

If a Section 404 permit is obtained, the applicant must also obtain a water quality certification from the RWQCB under Section 401 of the Clean Water Act (CWA). Written verification of the Section 404 permit and the Section 401

water quality certification shall be submitted to the Community Development Department.

The applicant shall also provide evidence to the Community Development Department of consultation with CDFW to determine if a Streambed Alteration Agreement is required for on-site activities pursuant to Section 1602 of the State Fish and Game Code.

If the mapped drainage shown on the USGS and other data sources is determined by regulatory agencies to be a jurisdictional waters on the site, then an ECCCHCP/NCCP fee calculation for permanent impacts to wetlands or streams should be assessed in addition to the development fee, unless the design of the proposed project is modified to avoid regulated habitat or provide adequate alternative compensatory mitigation.

d. Would the project interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites? ..... Less-Than-Significant Impact

Discussion (d.)

The proposed project site is bordered by Marsh Creek Road to the south and is fenced on all sides. Such features present a partial barrier to wildlife movement. The site does not contain any existing waterways that would provide habitat for native resident or migratory fish. Furthermore, the proposed improvements would be limited to the southeastern portion of the project site; the remainder of the site would designated open space and would remain as such. Therefore, the proposed project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites, and a ***less-than-significant*** impact would occur.

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? ..... Less-Than-Significant With Mitigation Incorporated

Discussion (e.)

The proposed project would be required to comply with all relevant policies and ordinances of the City of Clayton, including the Tree Protection Ordinance (Chapter 15.70 of the Municipal Code). The Tree Protection Ordinance calls for the protection of certain species of trees, and a Tree Removal Permit when removal of any tree with a trunk diameter of six inches or greater is proposed. In addition, the Marsh Creek Road Specific Plan includes policies related to protection of existing trees (pg. 63), encouraging retention of existing

trees wherever possible. An Arborist Report was prepared by Traverso Tree Service, for the project site to inventory all on-site trees and make recommendations regarding tree preservation and removal based on tree health, structural condition, and location (see Appendix B).[12] The Arborist Report evaluated a total of 21 trees, ten of which are located on-site.[13] Given their close proximity to the project site, 11 off-site trees were surveyed. None of the 21 trees surveyed are protected under the City of Clayton Tree Ordinance due to their size and species. According to the Arborist Report, approximately nine (non-native) on-site trees (two black locusts and seven trees of heaven) would require removal to accommodate the proposed project. Because the trees are non-native, they would not require replacement pursuant to the City's Tree Preservation Ordinance. It is noted, however, that the project includes landscaping along Marsh Creek Road and throughout the proposed subdivision, as shown in Figure 10 and Figure 11. The remaining trees, the majority of which are located off-site, along the boundaries of the CCWD parcel, would be retained. Though not protected by the City's Tree Protection Ordinance, the arborist report includes recommendations to protect these trees during construction. Without implementation of protection measures, the proposed project could conflict with policies protecting biological resources, and could result in a ***potentially significant*** impact.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above potential impact to a *less-than-significant* level.

Mitigation Measure 5. *The following tree protection measures shall be implemented pursuant to the recommendations listed in the Arborist Report, to the extent feasible:*

a) The applicant shall submit for the review and approval of the Community Development Director a tree protection plan to identify the location of the existing trees to be retained, as identified in the Arborist Report.

b) Adjust the proposed Marsh Creek Road path design to provide two feet of additional clearance from tree #43.

c) Prior to construction or grading, the project contractor shall install fencing to construct a temporary Tree Protection Zone (TPZ) around trees #43 and #60.

d) TPZ fencing shall remain in an upright sturdy manner from the start of grading until the completion of construction. Fencing shall not be adjusted or removed without consulting the project arborist.

e) If roots greater than two-inches in diameter are encountered near tree #61 during construction of the

[12] Traverso Tree Service. *Re: Arborist Report for Oak Creek Canyon, Marsh Creek Road & Diablo Parkway, Clayton.* October 10, 2019.

[13] It is noted that a few additional trees are located on-site, notably, a few valley oak trees located at the far north end of proposed Lot #4. Because these trees are well outside of the construction footprint, they were not included in the Arborist Report.

proposed ditch, roots shall be cleanly pruned with a handsaw or sawzall.

f) Pruning shall be performed by personnel certified by the International Society of Arboriculture (ISA). All pruning shall adhere to ISA and American National Standards and Best Management Practices.

g) Should TPZ encroachment be necessary, the project contractor shall contact the project arborist for consultation and recommendations.

h) The project contractor shall keep TPZs free of all construction-related materials, debris, fill s oil, equipment, etc. The only acceptable material is mulch spread out beneath the trees.

i) Should any damage to the trees occur, the contractor shall promptly notify the project arborist to appropriately mitigate the damage.

f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan? ..... Less-Than-Significant-Impact

Discussion (f.)

The East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (ECCCHCP/NCCP) was prepared in 2007 and the City of Clayton became a signatory in January 2008. The ECCCHCP/NCCP is intended to provide a coordinated, regional approach to special-status species conservation and development regulation. A total of 28 species are covered under the ECCCHCP/NCCP. The ECCCHCP/NCCP provides streamlined permits from the USFWS and CDFW for covered species for new urban development projects and a variety of public infrastructure projects. Development fees within the ECCCHCP/NCCP area are assessed based on fee zones and land cover types.

A Planning Survey Report has been prepared for the proposed project in order to comply with and receive permit coverage under the ECCHCP/NCCP. Per the Planning Survey Report, the project site is located within Development Fee Zone 2. As noted previously, the site comprises two field-verified land cover types: 6.57 acres of annual grassland and 2.46 acres of ruderal grassland. The proposed project would be subject to pay all applicable fees according to the Fee Zone Map of the ECCCHCP/NCCP prior to construction.. Therefore, the project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, and a ***less-than-significant*** impact would result from the proposed project.

5. CULTURAL RESOURCES.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	□	□	X	□
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	□	X	□	□
c.	Disturb any human remains, including those interred outside of dedicated cemeteries.	□	X	□	□

a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?.....Less-Than-Significant

Discussion (a.)

The proposed project is primarily undeveloped and is absent of any existing structures. In addition, the site is not included in the Historical Sites listed in the City of Clayton General Plan or indicated in Exhibit V-3 of the General Plan Community Design Element. Furthermore, a records search of the California Historic Resources Information System (CHRIS) was performed by the Northwest Information Center (NWIC) for cultural resource site records and survey reports within the project area.[14] The NWIC concluded that the project site does not contain any recorded historic buildings or structures on any lists of historic resources. As such, the proposed project would not cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5; and a ***less-than-significant*** impact would occur.

b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5? ... Less-Than-Significant With Mitigation Incorporated

c. Disturb any human remains, including those interred outside of dedicated cemeteries? Less-Than-Significant With Mitigation Incorporated

Discussion (b. and c.)

A field investigation was conducted by ASI Archeology on the portion of the site proposed for development. No cultural or archeological resources were identified by the field investigation and the likelihood of discovering such artifacts is judged to be low except in the southern portion of the site which is relatively flat and where deposition of earthen material has occurred from higher elevations to the north. A Sacred Lands File search was conducted by the Native American Heritage Commission in 2017, which identified sacred sites in the project area, but no specific location data was provided.

[14] Northwest Information Center. *Re: Records search results for the proposed Oak Creek Canyon Project at APN 119-070-008 at the intersection of Marsh Creek Road and Diablo Parkway, Clayton, CA.* July 14, 2020.

Based on the above, the possibility exists that previously undiscovered buried archaeological resources and/or human remains could be present on-site, and accidental discovery could occur during construction of the project. Therefore, the proposed project could result in a ***potentially significant*** impact to such resources.

Mitigation Measure(s)

The following mitigation measures would reduce the above potential impact to a *less-than-significant* level.

Mitigation Measure 6. *Prior to the issuance of a grading permit, the grading plan shall include a requirement (via notation) indicating that if cultural resources, or human remains are encountered during site grading or other site work, all such work shall be halted immediately within 100 feet of the area of discovery and the contractor shall immediately notify the City of the discovery. In such case, the City, at the expense of the project applicant, shall retain the services of a qualified archaeologist for the purpose of recording, protecting, or curating the discovery as appropriate. The archaeologist shall be required to submit to the City for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the vicinity of the discovery, as identified by the qualified archaeologist, shall not be allowed until the preceding steps have been taken.*

Mitigation Measure 7. *Pursuant to State Health and Safety Code §7050.5(c) State Public Resources Code §5097.98, if human bone or bone of unknown origin is found during construction, all work shall stop within 100 feet of the vicinity of the find and the Contra Costa County Coroner shall be contacted immediately. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission who shall notify the person believed to be the Most Likely Descendant (MLD). The MLD shall work with the contractor to develop a pr ogram for re-internment of the human remains and any associated artifacts. Additional work shall not take place in the immediate vicinity of the find, which shall be identified by the qualified archaeologist at the applicant's expense, until the preceding actions have been implemented.*

6. ENERGY

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	□	□	X	□
b.	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	□	□	X	□

a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? .....Less-Than-Significant

b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? .....Less-Than-Significant

Discussion (a. and b.)

The main forms of available energy supply are electricity, natural gas, and oil. A description of the 2019 California Green Building Standards Code (CAL Green Code) and the Building Energy Efficiency Standards, with which the proposed project would be required to comply, as well as discussions regarding the proposed project's potential effects related to energy demand during construction and operations are provided below.

California Green Building Standards Code

The 2019 CAL Green Code is a portion of the CBSC, otherwise known as the CAL Green Code (CCR Title 24, Part 11), which became effective on January 1, 2020.[15] The purpose of the CAL Green Code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices. The provisions of the code apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure throughout California. Requirements of the CAL Green Code include, but are not limited to, the following measures:

- Compliance with relevant regulations related to future installation of Electric Vehicle charging infrastructure in residential and non-residential structures;
- Indoor water use consumption is reduced through the establishment of maximum fixture water use rates;
- Outdoor landscaping must comply with the California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), or a local ordinance, whichever is more stringent, to reduce outdoor water use;

[15] California Building Standards Commission. *California Green Building Standards Code*. 2019.

- Diversion of 65 percent of construction and demolition waste from landfills; and
- Mandatory use of low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particle board.
- For some single-family and low-rise residential development developed after January 1, 2020, mandatory on-site solar energy systems capable of producing 100 percent of the electricity demand created by the residence(s). Certain residential developments, including those developments that are subject to substantial shading, rendering the use of on-site solar photovoltaic systems infeasible, are exempted from the foregoing requirement.

Building Energy Efficiency Standards

The 2019 Building Energy Efficiency Standards is a portion of the CBSC, which expands upon energy efficiency measures from the 2016 Building Energy Efficiency Standards. The 2019 Building Energy Efficiency Standards are in effect for building permit applications submitted after January 1, 2020. The 2019 standards provide for additional efficiency improvements beyond the current 2016 standards. Non-residential buildings built in compliance with the 2019 standards are anticipated to use approximately 30 percent less energy compared to the 2016 standards, primarily due to lighting upgrades. For residential buildings, compliance with the 2019 standards will use approximately seven percent less energy due to energy efficiency measures compared to homes built under the 2016 standards. One of the improvements included within the 2019 Building Energy Efficiency Standards is the requirement that certain residential developments, including some single-family and low-rise residential developments, include on-site solar energy systems capable of producing 100 percent of the electricity demanded by the residences. Certain residential developments, including developments that are subject to substantial shading, rendering the use of on-site solar photovoltaic systems infeasible, are exempted from the foregoing requirement; however, such developments are subject to all other applicable portions of the 2019 Building Energy Efficiency Standards. Once rooftop solar electricity generation is factored in, homes built under the 2019 standards will use approximately 53 percent less energy than those under the 2016 standards.

Construction Energy Use

Construction of the proposed project would involve on-site energy demand and consumption related to use of oil in the form of gasoline and diesel fuel for construction worker vehicle trips, hauling and materials delivery truck trips, and operation of off-road construction equipment. In addition, diesel-fueled portable generators may be necessary to provide additional electricity demands for temporary on-site lighting, welding, and for supplying energy to areas of the site where energy supply cannot be met via a hookup to the existing electricity grid. Project construction is not anticipated to involve the use of natural gas appliances or equipment.

Even during the most intense period of construction, due to the different types of construction activities (e.g., site preparation, grading, building construction), only portions of the project site would be disturbed at a time, with operation of construction equipment occurring at different locations on the project site, rather than a single location. In addition, all construction equipment and operation thereof would be regulated per the CARB In-Use Off-Road Diesel Vehicle Regulation. The In-Use Off-Road Diesel Vehicle Regulation is

intended to reduce emissions from in-use, off-road, heavy-duty diesel vehicles in California by imposing limits on idling, requiring all vehicles to be reported to CARB, restricting the addition of older vehicles into fleets, and requiring fleets to reduce emissions by retiring, replacing, or repowering older engines, or installing exhaust retrofits. In addition, as a means of reducing emissions, construction vehicles are required to become cleaner through the use of renewable energy resources. The In-Use Off-Road Diesel Vehicle Regulation would therefore help to improve fuel efficiency for equipment used in construction of the proposed project. Technological innovations and more stringent standards are being researched, such as multi-function equipment, hybrid equipment, or other design changes, which could help to further reduce demand on oil and limit emissions associated with construction.

The CARB prepared the 2017 Climate Change Scoping Plan Update (2017 Scoping Plan),[16] which builds upon previous efforts to reduce GHG emissions and is designed to continue to shift the California economy away from dependence on fossil fuels. Appendix B of the 2017 Scoping Plan includes examples of local actions (municipal code changes, zoning changes, policy directions, and mitigation measures) that would support the State's climate goals. The examples provided include, but are not limited to, enforcing idling time restrictions for construction vehicles, utilizing existing grid power for electric energy rather than operating temporary gasoline/diesel-powered generators, and increasing use of electric and renewable fuel-powered construction equipment. The CARB In-Use Off-Road Diesel Vehicle Regulation described above, with which the proposed project must comply, would be consistent with the intention of the 2017 Scoping Plan and the recommended actions included in Appendix B of the 2017 Scoping Plan.

Based on the above, the temporary increase in energy use occurring during construction of the proposed project would not result in a significant increase in peak or base demands or require additional capacity from local or regional energy supplies. In addition, the proposed project would be required to comply with all applicable regulations related to energy conservation and fuel efficiency, which would help to reduce the temporary increase in demand.

Operational Energy Use

Following implementation of the proposed project, PG&E would provide electricity and natural gas to the project site. Energy use associated with operation of the proposed project would be typical of residential uses, requiring electricity and natural gas for interior and exterior building lighting, heating, ventilation, and air conditioning (HVAC), electronic equipment, machinery, refrigeration, appliances, security systems, and more. Maintenance activities during operations, such as landscape maintenance, would involve the use of electric or gas-powered equipment. In addition to on-site energy use, the proposed project would result in transportation energy use associated with vehicle trips generated by the proposed residential development.

The proposed project would be subject to all relevant provisions of the most recent update of the CBSC, including the CAL Green Code and the Building Energy Efficiency Standards. Adherence to the most recent CAL Green Code and the Building Energy

[16] California Air Resources Board. *The 2017 Climate Change Scoping Plan Update.* January 20, 2017.

Efficiency Standards would ensure that the proposed structures would consume energy efficiently through the incorporation of such features as efficient water heating systems, high performance attics and walls, and high efficacy lighting. In addition, California has set energy-use reduction goals targeting zero-net-energy use in all new homes by 2020. The CALGreen Code requires that new buildings use a combination of energy efficiency and distributed renewable energy generation to meet all annual energy needs. As such, the proposed residences would be constructed to rely on 100 percent renewable energy resources. Required compliance with the CBSC would ensure that the building energy use associated with the proposed project would not be wasteful, inefficient, or unnecessary.

With regard to transportation energy use, the proposed project would comply with all applicable regulations associated with vehicle efficiency and fuel economy. In addition, as discussed in Section 17, Transportation, of this IS/MND, the project area is currently provided transit service by the Central Contra Costa Transit Authority. The nearest bus stop relative to the project site is located at the Marsh Creek Road/Bigelow Street intersection, approximately 0.7-mile west of the site. Transit would provide access to several grocery stores, restaurants, banks, and schools within close proximity to the project site. The site's access to public transit and proximity to such uses would reduce VMT and, consequently, fuel consumption associated with the proposed project, thereby providing for increased pedestrian connectivity with the surrounding area and resulting in reduced vehicle use.

Conclusion

Based on the context above, construction and operation of the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources or conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Thus, a ***less-than-significant*** impact would occur.

7. GEOLOGY AND SOILS.

Issues			Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:						
a.	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:					
	i.	Rupture of a known earthquake fault, as delineated on the most recent Alquist - Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	□	□	X	□
	ii.	Strong seismic ground shaking?	□	□	X	□
	iii.	Seismic-related ground failure, including liquefaction?	□	□	X	□
	iv.	Landslides?	□	X	□	□
b.	Result in substantial soil erosion or the loss of topsoil?		□	X	□	□
c.	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?		□	X	□	□
d.	Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial risks to life or property?		□	X		□
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?		□	□	□	X
f.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X		

a-i. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist - Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area based on other substantial evidence of a known fault? ..... Less-Than-Significant Impact

a-ii. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?..... Less-Than-Significant Impact

a-iii. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction? ..... Less-Than-Significant Impact

Discussion (a-i., a-ii, aiii.)

A Geotechnical Report was prepared for the proposed project by ENGEO, Inc.,[17] while a peer review of the Geotechnical Report was prepared by Alan Kropp & Associates, Inc.[18] (see Appendix C). According to the Geotechnical Report, the proposed project site is not located within an Alquist-Priolo Fault Zone; however, large earthquakes have historically occurred in the San Francisco Bay Area. The nearest active fault is the Greenville Fault, located approximately one mile southeast of the site. Other active faults in the region include the Concord, Calaveras, Cordelia, Green Valley, Hayward, and San Andreas faults. Given that none of the faults cross the project site, the potential for ground rupture is low.

An earthquake of moderate to high magnitude generated within the project region could cause considerable ground shaking at the site. Nonetheless, all structures proposed for the project would be designed in accordance with the requirements of the adopted edition of the California Building Code (CBC) in place at the time of construction. Structures built according to the seismic design provisions of current building codes should be able to: 1) resist minor earthquakes without damage; 2) resist moderate earthquakes without structural damage but with some nonstructural damage; and 3) resist major earthquakes without collapse but with some structural as well as nonstructural damage. Consequently, as the proposed project would comply with all applicable CBC recommendations, the project would not be anticipated to be substantially affected by ground shaking.

Liquefaction is a phenomenon in which saturated cohesionless soils are subject to a temporary loss of shear strength due to pore pressure build-up under the cyclic shear stresses associated with earthquakes. Per the Geotechnical Report, based on the material types and densities of materials present on-site, the risk of liquefaction is considered low to negligible.[19]

Therefore, the proposed project would not expose people or structures to substantial adverse effects including the risk of loss, injury, or death involving the rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zone Map, strong seismic ground shaking, and liquefaction, resulting in a ***less-than-significant*** impact.

[17] ENGEO Incorporated. Updated Geotechnical Report, Oak Creek Canyon, 5 Lots – Subdivision 6826, APN #119-070-008, Clayton, California. February 22, 2008.

[18] Alan Kropp & Associates, Inc. *RE: Geotechnical/Geological Peer Review, Oak Creek Canyon Project, Clayton, California.* February 25, 2020.

[19] ENGEO, *Updated Geotechnical Report, Oak Creek Canyon*, February 22, 2008, pg. 15.

a-iv. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related landslides? ..... Less-Than-Significant Impact With Mitigation Incorporated

c. Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? ..... Less-Than-Significant Impact With Mitigation Incorporated

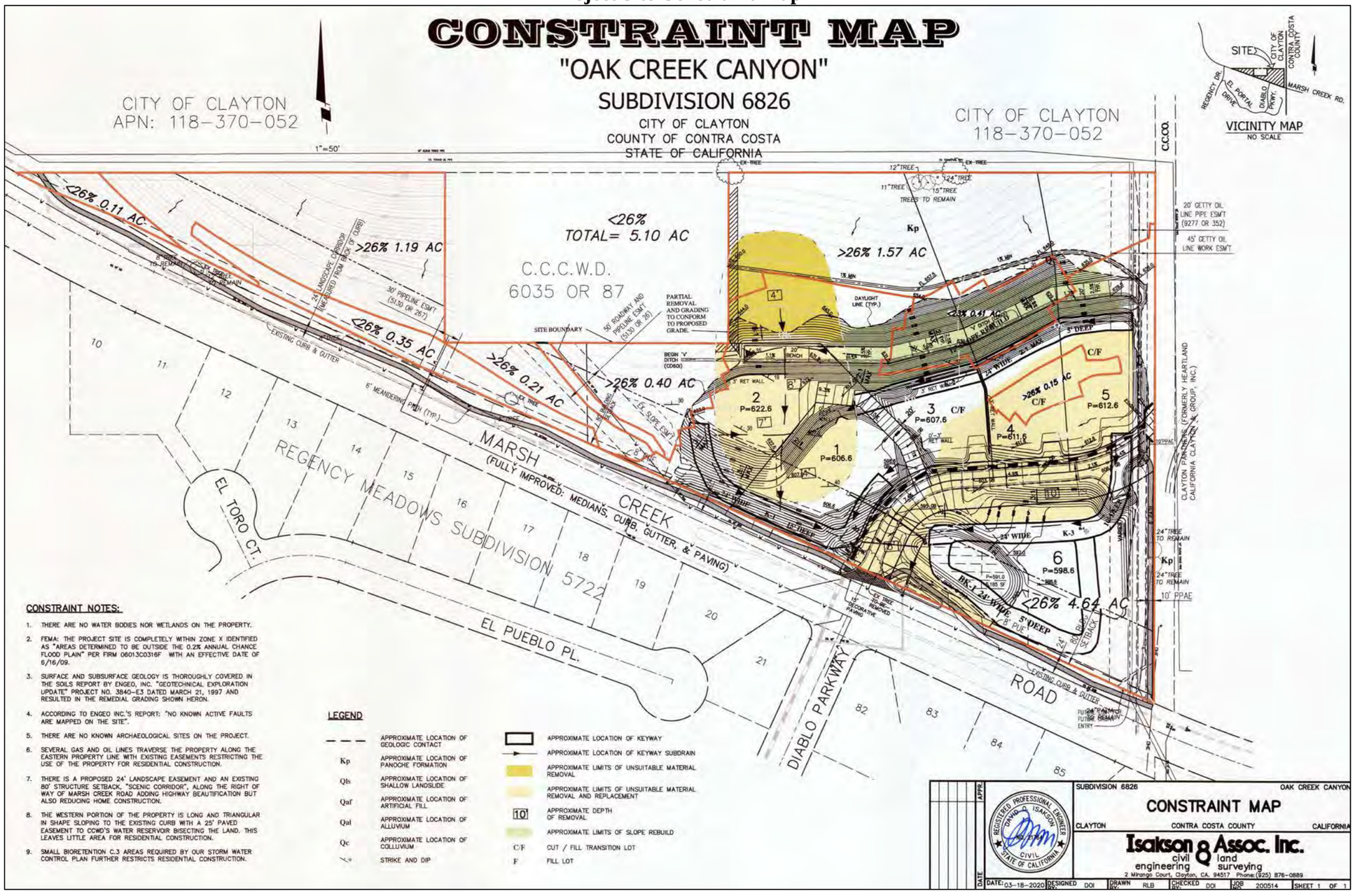
Discussion (a-iii. and c.)

The Geotechnical Report included an analysis of a postulated large deep-seated landslide feature previously mapped at the site by Nilsen (1975). ENGEO excavated Trenches T-1, T-2, and test pits TP-2, TP-3, and TP-4 near the limits of the previous postulated large slide. ENGEO encountered soil to a depth of up to eight feet in the trenches and test pits overlying bedrock units. To resolve peer review comments about whether or not there exists evidence of the postulated Nilsen landslide, ENGEO performed two exploratory trenches at the limits of the mapped feature. Both trenches encountered bedrock units of moderately weathered, and moderately to highly fractured claystone and siltstone interbedded with fine to medium grained, moderately to highly weathered sandstone typical of the Panoche Formation. The bedding encountered in the trenches generally coincides with bedding observed in ENGEOs' exploratory test pits throughout the subject property. ENGEO also observed continuous exposure of intact bedrock in both exploratory trenches. Based on the results of this supplemental exploration, ENGEO concluded that there is no evidence of the postulated large landslide feature mapped by Nilsen. Furthermore, during ENGEO's supplemental trenching work, the City of Clayton contract geologic peer reviewer, Mr. Jim Joyce, CEG, met with ENGEO's Certified Engineering Geologist to observe the locations of, and the conditions in, the exploratory trenches and test pits; it was concurred by both ENGEO and Mr. Joyce that the length and locations of the trenches and test pits were adequate to determine there was no evidence of the deep-seated landslide as previously postulated by Nilsen.[20]

ENGEO did identify a relatively shallow landslide involving soil landslide debris in the western swale, above Lots #1 and #2. ENGEO recommends that the surficial landslide and areas of colluvium mapped along slopes be overexcavated and removed, and replaced with properly drained engineered fill. Figure 14 generally indicates the areas of the site where on-site soils are unsuitable for development purposes. The Geotechnical Report includes several recommendations for soil engineering and foundation design to ensure that the shallow landslide debris does not pose adverse effects to on-site structures and future residents.

[20] ENGEO, *Updated Geotechnical Report, Oak Creek Canyon*, February 22, 2008, pg. 11.

Figure 14
Project Site Constraint Map



Lateral spreading is a failure within a nearly horizontal soil zone, commonly associated with liquefaction, which causes the overlying soil mass to move towards a free face or down a gentle slope. Because the potential for liquefaction is considered low, and the proposed development area is not adjacent to a free face, it is ENGEO's opinion that lateral spreading is unlikely.[21]

Subsidence occurs when the earth's surface sinks due to settlement of soils during earthquake shaking, excessive groundwater extraction, and/or loose soil conditions. Groundwater extraction would not occur at the site; groundwater was not encountered in the test pits or trenches at the time of excavation. During ENGEO's field explorations, layers of soft, medium stiff to stiff clay and silty clay were encountered to depths between approximately 4 and 13 feet below existing grades; these layers were typically encountered in the swales in the western and eastern portion of the site and in the alluvium and imported fills in the southeastern portion of the site. The fine-grained deposits in these areas appear to be potentially compressible and could result in measurable consolidation settlements. Compressible soils should be removed and replaced prior to fill placement in these areas.

Based on the above, in the absence of proper mitigation to remediate soils previously subject to shallow landslide, and those compressible soils that could result in subsidence, a ***potentially significant*** impact could occur as a result of the proposed project.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

Mitigation Measure 8. *Prior to approval of the improvement plans for the project, all recommendations from the Geotechnical Report prepared for the project by ENGEO (2008) shall be incorporated into the improvement plans to the satisfaction of the City Engineer. In addition, the applicant shall retain a California Registered Geotechnical Engineer to perform field observations during grading to determine the depth of removal of compressible soils. Compliance with the recommendations of the Geotechnical Engineer shall be provided to the City Engineer.*

b. Would the project result in substantial soil erosion or the loss of topsoil? .. Less-Than-Significant With Mitigation Incorporated

Discussion (b.)

Construction of the proposed project would involve grading of the development footprint, including sloped portions of the project site, to accommodate the proposed site improvements. After grading, but prior to the overlaying of the ground surface with structures, topsoil of the disturbed portions of the site would be exposed, and the earth surfaces would be susceptible to erosion from wind and water. During the grading and excavation phases of construction, appropriate measures consistent with the Clayton Stormwater Management Ordinance and other applicable regulations (e.g., State Regional Water Quality Control Board National Pollutant Discharge Elimination System

[21] ENGEO, *Updated Geotechnical Report, Oak Creek Canyon*, February 22, 2008, pg. 16.

regulations) would be required to be implemented in order to control erosion on the site and minimize the impacts related to loss of topsoil. See Section 9, Hydrology and Water Quality, of this IS/MND for further discussion regarding the relationship of erosion to water quality. Because the proposed project could result in soil erosion or the loss of topsoil associated with grading and excavation of the project site during construction, a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

Mitigation Measure 9. *Prior to the issuance of a grading permit, the project applicant shall prepare to the satisfaction of the City Engineer, an erosion control plan that utilizes standard construction practices to limit the erosion effects during construction of the proposed project. Actions should include, but are not limited to:*

a) Hydro-seeding;
b) Placement of erosion control measures within drainage ways and ahead of drop inlets;
c) The temporary lining (during construction activities) of drop inlets with "filter fabric";
d) The placement of straw wattles along slope contours;
e) Use of a designated equipment and vehicle "wash-out" location;
f) Use of siltation fences;
g) Use of on-site rock/gravel road at construction access points; and
h) Use of sediment basins and dust palliatives.

d. Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial risks to life or property? ..... Less-Than-Significant Impact

Discussion (d.)

Expansive soils are subject to shrinking and swelling as a result of seasonal fluctuations in soil moisture content, potentially resulting in heaving and cracking of slabs-on-grade, pavements, and structures founded on shallow foundations. Per the Geotechnical Report, the on-site soils were indicated to have a moderate to very high potential for expansion and shrink-swell behavior. However, building damage due to volume changes associated with expansive soils may be reduced through proper foundation design. In order to minimize potential risks associated with expansive soils, the Geotechnical Report provides specific recommendations related to foundation design. As noted above, under question 'aiv' and 'c', the project would be required to implement Mitigation Measure 8, which requires recommendations from the Geotechnical Report be incorporated into the project improvement plans. With implementation of Mitigation Measure 8, the proposed project would ensure that the recommendations within the Geotechnical Report related to

expansive soils are properly implemented during construction. Thus, the proposed project would not create substantial direct or indirect risks to life or property related to being located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), and a ***less-than-significant*** impact would occur.

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? ..... No Impact

Discussion (e.)

The proposed residences would be connected to the City of Clayton's sewer system and would not require the installation or use of septic tanks. Therefore, the proposed project would have ***no impact*** regarding having soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems.

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? ..... Less-Than-Significant Impact

Discussion (f.)

The City's General Plan does not note the existence of any unique geologic features within the City. Consequently, implementation of the proposed project would not be anticipated to have the potential to result in direct or indirect destruction of unique geologic features. The City's General Plan does not indicate the presence of any paleontological resources within the City Planning Area.

In addition, the majority of the surrounding area is developed and paleontological resources are not known to have not been encountered in the vicinity. Thus, existing paleontological resources are not expected to occur on the site. Nonetheless, the potential exists for previously unknown paleontological resources to exist within the project site. Ground-disturbing activity such as grading, trenching, or excavating associated with implementation of the proposed project would have the potential to disturb or destroy such resources, if present. However, Mitigation Measures 6 and 7 require the appropriate actions be taken should any cultural resources, human remains, or bone of unknown origin be found within the project site during construction activities. With the implementation of Mitigation Measures 6 and 7, the proposed project would not result in the direct or indirect destruction of a unique paleontological resource, and a ***less-than-significant*** impact would occur.

8. GREENHOUSE GAS EMISSIONS

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	□	□	X	□
b.	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	□	□	X	□

a. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? ..... Less-Than-Significant Impact

b. Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? ..... Less-Than-Significant Impact

Discussion (a. and b.)

Emissions of greenhouse gases (GHGs) contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on earth. An individual project's GHG emissions are at a micro-scale level relative to global emissions and effects to global climate change; however, an individual project could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. As such, impacts related to emissions of GHG are inherently considered cumulative impacts.

Implementation of the proposed project would cumulatively contribute to increases of GHG emissions. Estimated GHG emissions attributable to future development would be primarily associated with increases of carbon dioxide (CO_2) and, to a lesser extent, other GHG pollutants, such as methane (CH_4) and nitrous oxide (N_2O) associated with area sources, mobile sources or vehicles, utilities (electricity and natural gas), water usage, wastewater generation, and the generation of solid waste. The primary source of GHG emissions for the project would be mobile source emissions. The common unit of measurement for GHG is expressed in terms of annual metric tons of CO_2 equivalents ($MTCO_2e$/yr).

The proposed project is located within the jurisdictional boundaries of BAAQMD. The BAAQMD threshold of significance for project-level operational GHG emissions is 1,100 $MTCO_2e$/yr or 4.6 $MTCO_2e$/yr per service population (population + employees). BAAQMD's approach to developing a threshold of significance for GHG emissions is to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions needed to move towards climate stabilization. If a project would generate GHG emissions

above the threshold level, the project would be considered to generate significant GHG emissions and conflict with applicable GHG regulations.

The proposed project's GHG emissions were quantified with CalEEMod using the same assumptions as presented in Section 3, Air Quality, of this IS/MND, and compared to the thresholds of significance noted above. The proposed project's required compliance with the 2019 California Building Energy Efficiency Standards Code was assumed in the modeling. In addition, the CO_2 intensity factor within the model was adjusted to reflect the PG&E's anticipated CO_2 emissions factor for the year 2023. All CalEEMod results are included in Appendix A to this IS/MND.

Construction GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change. Neither the City nor BAAQMD have an adopted threshold of significance for construction-related GHG emissions, nor do they require quantification. Nonetheless, the proposed project's construction GHG emissions have been estimated. The CalEEMod emissions estimates prepared for the proposed project determined that unmitigated project construction would result in total emissions of 309.04 $MTCO_2e$ over the course of the construction period.

The estimated maximum annual GHG emissions related to operations of the proposed project are presented in Table 4 below. As shown in Table 4, the project's maximum annual unmitigated operation GHG emissions were estimated to be approximately 65.23 $MTCO_2e$/yr. Thus, implementation of the proposed project would result in operational emissions well below the BAAQMD's applicable 1,100 $MTCO_2e$/yr threshold of significance for GHG emissions. Even if the total construction emissions are added to the annual operations emissions, the sum would be 374.27 $MTCO_2e$, which remains below the BAAQMD threshold of significance.

Table 4
Operational GHG Emissions

Source	GHG Emissions ($MTCO_2e$/yr)
Area	0.83
Energy	10.55
Mobile	49.54
Waste	3.60
Water	0.73
Total Annual Operational GHG Emissions	**65.23**
BAAQMD Threshold	**1,100 $MTCO_2e$/yr**
Exceeds Threshold?	**NO**

Source: CalEEMod, June 2020 (see Appendix A).

Based on the above, the proposed project would not be considered to generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs; and impacts would be considered ***less than significant***.

9. HAZARDS AND HAZARDOUS MATERIALS.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	□	□	X	□
b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	□	X		□
c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	□	□	X	□
d.	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	□	□	□	X
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	□	□	□	X
f.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	□	□	X	□
g.	Expose people or structures, either directly or indirectly, to the risk of loss, injury or death involving wildland fires?	□	□	X	□

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?..... Less-Than-Significant Impact

Discussion (a.)

The proposed project would consist of operations associated with the proposed residential uses. The residential uses would not involve the routine transport, use, or disposal of hazardous materials. Thus, during operations, the proposed project would not create any hazards to the public or the environment through routine transport, use, disposal, or reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.

Construction activities would involve the use of heavy equipment, which would contain fuels, oils, and hydraulic fluid. In addition, various other products such as concrete, paints, and adhesives would likely be used on-site. However, the project contractor would be required to comply with all California Health and Safety Codes and local ordinances regulating the temporary handling, storage, and transportation of hazardous and toxic materials, as overseen by the California Environmental Protection Agency (EPA) and

Department of Toxic Substances Control (DTSC). Should an accidental release of hazardous materials occur during construction, the City (or City crews) and/or contractor, is required to notify the Contra Costa Fire Protection District (CCCFPD), who would then monitor the conditions and recommend appropriate remediation measures.

Based on the above, the proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, and a ***less-than-significant*** impact would occur.

b. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?..... Less-Than-Significant Impact With Mitigation Incorporated

Discussion (b.)

Several oil pipeline operation and maintenance easements owned by Getty Oil Company are situated parallel to the eastern project site boundary. Within the easements are a 20-inch vacant pipeline operated by Crimson and a 16-inch gas line operated by Phillips 66. Four active oil pipelines are located in Marsh Creek Road along the project site frontage. One is a 20-inch pipeline owned by Crimson Midstream, LLC. The other three lines along Marsh Creek Road consist of a 16-inch pipeline, a 20-inch pipeline, and a 24-inch pipeline operated by Coalinga-Avon.

Preliminary plans show the existing pipelines within the easements along the eastern boundary of the site and along Marsh Creek Road would not be disturbed by construction activities. The project does not include improvements to Marsh Creek Road that could impact the pipelines within the roadway. After occupation of the proposed residences, excavation activities directed by homeowners or contractors, specifically within Lots #5 and #6 located near the easements along eastern boundary of the site, could create potential risks for rupture of the on-site pipelines. Out of an abundance of caution, pipeline owners and operators should be contacted at such time construction drawings are being prepared to ensure that final subdivision design does not have the potential to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment. Thus, a ***potentially significant*** impact could occur.

Mitigation Measure(s)

The following mitigation measures would reduce the above potential impact to a *less-than-significant* level.

Mitigation Measure 10. *Grading and construction plans and specifications for the project shall include the wording which specifies that construction contractors shall contact all pipeline operators (e.g., Shell, Conoco-Phillips) at least forty-eight (48) hours prior to start of construction activities to obtain detailed identification of underground oil pipes.*

Mitigation Measure 11. *Notification shall be provided on the deeds and California Department of Real Estate disclosure forms to future property owners regarding the presence of crude oil pipelines. The wording of the notification shall be approved by the Clayton Community Development Director and City Attorney.*

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? ..... Less-Than-Significant Impact

Discussion (c.)

The project site is not located within one-quarter mile of any school. The nearest school is the Diablo View Middle School, located approximately 0.35-mile northeast of the project site. Therefore, the proposed project would result in a ***less-than-significant*** impact associated with emitting hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of a school.

d. Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? ..... No Impact

Discussion (d.)

The proposed project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5,[22] and would not create a significant hazard to the public or the environment. Therefore, ***no impact*** would occur.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? ..... No Impact

Discussion (e.)

The nearest airport to the proposed project site is the Buchanan Field Airport, located approximately 8.25 miles to the west of the site. Therefore, the proposed project site is not located within an airport land use plan or within the vicinity or a public or private airport. As such, the project would not result in a safety hazard for people residing or working in the project area, and ***no impact*** would occur.

[22] California Department of Toxic Substances Control. *EnviroStor*. Available at: https://www.envirostor.dtsc.ca.gov/public/. Accessed June 2020.

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? ..... Less-Than-Significant Impact

Discussion (f.)

The City of Clayton has an adopted Emergency Operations Plan, dated January 2012, which identifies the City's emergency planning, organizational, and response policies and procedures. The Emergency Operations Plan addresses how the City would respond to extraordinary events or disasters, including departmental Standard Operating Procedures. The primary exit routes out of the City to the north are Pine Hollow Road, Clayton Road, and Concord Boulevard. To the south, the primary exit route out of the City is Marsh Creek Road.

Although the proposed project would involve improvements to the Marsh Creek Road frontage, including a 24-foot landscape corridor and a six-foot meandering trail, the improvements would not significantly impede vehicle traffic in the event of a major evacuation. In addition, during project construction, all equipment and materials would be staged on-site and would not substantially interfere with existing roadway operations. Furthermore, the proposed on-site roadway would provide adequate emergency access to future residents of the proposed development. Therefore, the proposed project would result in a ***less-than-significant*** impact associated with impairing implementation of, or physically interfering with, an adopted emergency response plan or emergency evacuation plan.

g. Would the project expose people or structures, either directly or indirectly, to the risk of loss, injury or death involving wildland fires? ..... Less-Than-Significant Impact

Discussion (g.)

According to the Diablo Fire Safe Council, the City of Clayton is located within a wildland urban interface (WUI). The WUI is defined as an area in which wildlands and communities are sufficiently close to each other to present a credible risk of fire spreading from one to another.[23] Chapter 7A of the CBC includes specific requirements related to the design and construction of new buildings located within a WUI. For example, Chapter 7A specifies that a fire sprinkler system is required to be installed in order to protect against fire hazards in a WUI. In compliance with the CBC (specifically Section 903.2.1.3, Group A-3), the design of the residences would include automatic fire sprinklers, and fire alarm systems would be incorporated pursuant to California Fire Code (CFC) requirements. Such features would help to address fire situations within the site, which would reduce the demand for fire protection services from the project site. Fire services to the Clayton area are provided by the Contra Costa County Fire Protection District (CCCFPD), with the nearest station located approximately 1.6 miles east of the site by way of Marsh Creek Road and Clayton Road.

[23] Diablo Fire Safe Council. *Clayton Morgan Territory Wildfire Action Plan: Public Review Draft*. January 25, 2016.

The proposed residential units are required to be designed in compliance with all applicable State and local standards and recommendations for new development, such as the CCCFPD's requirements for providing a water supply system for fire protection, and providing adequate emergency and fire access. In addition, the project would be required to provide "defensible space" around on-site structures consistent with CCCFPD guidelines. Adequate provision of defensible space is enforced by the CCCFPD Exterior Hazard Control Division. Therefore, the proposed project would not expose people or structures, either directly or indirectly, to the risk of loss, injury or death involving wildland fires, and ***less-than-significant*** impact would occur.

10. HYDROLOGY AND WATER QUALITY

Issues			Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:						
a.	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?		□	□	X	□
b.	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?		□	□	X	□
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:		□	□	□	□
	i.	Result in substantial erosion or siltation on- or off-site;			X	
	ii.	Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;			X	
	iii.	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			X	
	iv.	Impede or redirect flood flows?			X	
d.	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?		□	□	□	X
e.	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?		□	□	X	□

The following discussions are primarily based on a Stormwater Control Plan (SWCP) prepared for the proposed project by Isakson & Associates.[24]

a. Would the project violate any water quality standards or waste discharge requirements? ..... Less-Than-Significant Impact

ciii. Would the project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? ..... Less-Than-Significant Impact

Discussion (a. and ciii.)

Water quality and runoff issues associated with construction and operation of the proposed project are discussed in detail below.

[24] Isakson & Associates. *Stormwater Control Plan for Oak Creek Canyon, SUB 6826.* May 17, 2015.

Construction

During the early stages of construction activities, topsoil would be exposed due to grading and excavation of the site. After grading and prior to overlaying the ground surface with impervious surfaces and structures, the potential exists for wind and water erosion to discharge sediment and/or urban pollutants into stormwater runoff, which could adversely affect water quality downstream.

The State Water Resources Control Board (SWRCB) regulates stormwater discharges associated with construction activities where clearing, grading, or excavation results in a land disturbance of one or more acres. The City's National Pollutant Discharge Elimination System (NPDES) permit requires applicants to show proof of coverage under the State's General Construction Permit prior to receipt of any construction permits. The State's General Construction Permit requires a Storm Water Pollution Prevention Plan (SWPPP) to be prepared for the site. A SWPPP describes Best Management Practices (BMPs) to control or minimize pollutants from entering stormwater and must address both grading/erosion impacts and non-point source pollution impacts of the development project. Because the proposed project would disturb greater than one acre of land, the proposed project would be subject to the requirements of the State's General Construction Permit. Compliance with such requirements would minimize the potential for polluted runoff to leave the site during construction activities.

Operation

The proposed residential uses would not involve operations typically associated with the generation or discharge of polluted water. Thus, typical operations on the project site would not violate any water quality standards or waste discharge requirements, nor degrade water quality. However, addition of the impervious surfaces on the site would result in the generation of urban runoff, which could contain pollutants if the runoff comes into contact with vehicle fluids on parking surfaces and/or landscape fertilizers and herbicides. All municipalities within Contra Costa County (and the County itself) are required to develop more restrictive surface water control standards for new development projects as part of the renewal of the Countywide NPDES permit.

The City of Clayton has adopted the County C.3 Stormwater Standards, which require new development and redevelopment projects that create or alter 10,000 or more sf of impervious area to contain and treat all stormwater runoff from the project site. Given that the proposed project would create approximately 36,564 sf of impervious area, the proposed project would be subject to the requirements of the SWRCB and the Regional Water Quality Control Board (RWQCB), including the C.3 Standards, which are included in the City's NPDES General Permit. Compliance with such requirements would ensure that impacts to water quality standards or waste discharge requirements would not occur during operation of the proposed project.

The SWCP prepared for the proposed project conforms with the most recent Contra Costa Clean Water Program Stormwater C.3 Guidebook and verifies that the proposed project would comply with all City stormwater requirements. In compliance with the C.3 Guidebook, the proposed project would include a bio-retention basin, or Bio Retention Area BR1, located in the southeast portion of the project site, to the south of the proposed

roadway and to the west of Lot #6, near the site entrance (see Figure 9). Runoff from Lots #1 through #6, including pavement, rooftop and landscape/open areas, as well as a portion of the proposed roadway, would be directed to Bio Retention Area BR1 BR1 is comprised of an irregular shaped landscape area of approximately 5,185 sf. The basin would be sized to exceed the minimum volume requirement necessary to adequately handle all runoff from the proposed impervious surfaces and landscaping. The substantial portion of the site that would remain in open space would be self-treating.

The bio-retention basin would remove pollutants primarily by filtering runoff slowly through an active layer of soil. The process of stormwater moving through the soil layers would remove pollutants from the stormwater prior to subsurface infiltration or discharge to City infrastructure. The bio-retention basin would be designed and constructed according to criteria from the Contra Costa Clean Water Program Stormwater C.3 Guidebook. Specifically, the bio-retention basin would include 18-inch depth "loamy sand" soil mix with minimum long-term percolation rate of five inches per hour, and a perforated pipe under drain would be bedded near the top with holes facing downward. In addition, the bio-retention basin would include outflow orifices to slowly meter flows to an in-tract 48-inch City-maintained storm drain that would be constructed in the proposed roadway. Storms larger than the 10-year design storm would exit the bio-retention basin by way of overflow outlet structures and discharge directly to the aforementioned 48-inch drain. The bio-retention basin would be designed to accommodate runoff for treatment and hydro modification as specified in the C.3 manual.

Based on the above, the proposed project would comply with the requirements of the SWRCB and the RWQCB, and would meet or exceed C.3 Standards. Therefore, during operation, the project would comply with all relevant water quality standards and waste discharge requirements, and would not degrade water quality.

Conclusion

Based on the SWCP prepared for the proposed project, the project would comply with all applicable regulations during operation, does not involve uses associated with the generation or discharge of polluted water, and would be designed to adequately treat stormwater runoff from the site prior to discharge. Therefore, a ***less-than-significant*** impact would occur.

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?..... Less-Than-Significant Impact

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? ..... Less-Than-Significant Impact

Discussion (b. and e.)

The Contra Costa Water District (CCWD) provides domestic water service to Clayton. The major source of CCWD water is the Sacramento River Contra Costa Water District Canal,

not pumped groundwater. The construction of six new residential buildings and associated improvements would result in a net increase in impervious surfaces; however, the surface area would not be large enough to significantly affect groundwater recharge. Additionally, the majority of the project site would remain in open space and the bioretention areas would allow for stormwater to infiltrate into the surrounding soil, thereby allowing the continued contribution to groundwater recharge at the site.

As such, the proposed project would not substantially deplete groundwater supplies or recharge at the site such that the project may impede sustainable groundwater management of the basin and would not conflict with an applicable groundwater management plan or water quality control plan. Thus, a ***less-than-significant*** impact would occur.

ci. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site? ..... Less-Than-Significant Impact

cii. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite? ..... Less-Than-Significant Impact

ciii. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?..... Less-Than-Significant Impact

Discussion (ci., cii., and ciii.)

As discussed above, runoff from the impervious areas of the site would be collected and conveyed to the proposed bio-retention basin. Per the SWCP, the bio-retention facilities would be designed to exceed the minimum volume needed to treat and control runoff from all proposed impervious surfaces. Therefore, despite the proposed project's increase in impermeable surfaces, the proposed project would not result in an increase in stormwater runoff leaving the site as compared to runoff that currently occurs. Furthermore, runoff entering the bio-retention basin would be able to partially infiltrate the soil in a similar manner to what currently occurs on the project site. The only expected runoff leaving the

site would occur in the case of heavy storms, where excess runoff not captured by the bio-retention basin would be discharged to the City's existing stormwater system. Consequently, runoff from the site would only occur in select circumstances, and the proposed project would not result in a net increase in the amount of runoff from the site. As a result, the capacity of existing stormwater drainage infrastructure would not be exceeded, and alterations to such infrastructure would not be needed.

In order to ensure that the proposed project's stormwater treatment facilities remain adequate, long-term maintenance would be required. Routine maintenance of the facilities is necessary to ensure that infiltration of water is unobstructed, erosion is prevented, and soils are held together by biologically active plant roots. Proper operation and maintenance of the stormwater management facilities would be the sole responsibility of the property owner. In accordance with Clayton Municipal Code Section 13.12.050, implementation of an approved SWCP and submittal of an approved Stormwater Control Operation and Maintenance Plan by the applicant shall be a condition precedent to a final building inspection or the issuance of a certificate of occupancy. All inspections and remedial actions would be logged in a Stormwater BMP Inspection and Maintenance Log.

Based on the above, the proposed project would not substantially alter the existing drainage pattern of the site or area in a manner which would result in erosion, siltation, or flooding on- or off-site, create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems, or provide substantial additional sources of polluted runoff. Consequently, the proposed project would result in a ***less-than-significant*** impact.

civ. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff water which would Impede or redirect flood flows?..... Less-Than-Significant Impact

Discussion (civ.)

Based on the FEMA Flood Insurance Rate Map (FIRM), (Map Number ID: 06013C0316F), the project site is within Zone X, which is described by FEMA as an area determined to be outside the 0.2 percent annual chance floodplain. In addition, dams or levees are not located upstream of the proposed project site; thus, flooding due to dam or levee failure would not occur. Because the project site is not within a 100-year floodplain, the proposed project would not place housing or structures within a 100-year floodplain or expose people or structures to risks involving flooding. Therefore, impacts would be ***less-than-significant***.

d. Would the project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? ..... No Impact

Discussion (d.)

A seiche is defined as a wave generated by rapid displacement of water within a reservoir or lake, due to an earthquake that triggers land movement within the water body or land sliding into or beneath the water body. The project site is not located near a water body that is susceptible to seiche hazard. Furthermore, due to the distance from the project site to the nearest coastline the project site would not be subject to tsunami hazards. Therefore, the proposed project would not expose people or structures to a significant risk of loss, injury, or death involving seiche, tsunami, or mudflow, and ***no impact*** would occur.

11. LAND USE.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Physically divide an established community?	□	□	X	□
b.	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	□	□	X	□

a. Would the project physically divide an established community? ..... Less-Than-Significant Impact

Discussion (a.)

The proposed project site is currently vacant and is absent of any housing or habitable structures. Currently, existing land uses in the project vicinity include single-family residences to the south and west, across Marsh Creek Road, and the water tank to the north. The proposed residences would be compatible with the existing residential development in the project area. Given that the proposed project would involve construction on a currently vacant site, and would not involve any features that would divide an established community. As such, the proposed project would not physically divide an established community, and ***no impact*** would occur.

b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?..... Less-Than-Significant Impact

Discussion (b.)

The proposed project includes a request to amend the General Plan and Marsh Creek Road Specific Plan land use designations for the site. The project site has been anticipated for five low density residential units since at least 2005, when the first tentative map was approved for the site. The requested amendments would only allow an increase of one residential unit, for a total of six. In addition, the proposed project would not conflict with any City policies and regulations adopted for the purpose of avoiding or mitigating an environmental effect. For example, the proposed project would comply with the City of Clayton Noise Element, as demonstrated in Section 13 of the IS/MND. Additionally, as discussed in Section 4, Biological Resources, the proposed project would comply Chapter 15.70, Tree Protection, of the City's Municipal Code, and Marsh Creek Road Specific Plan policies related to encouraging tree preservation. As such, the project would not conflict with any applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect, and a ***less-than-significant*** impact would occur.

12. MINERAL RESOURCES.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	□	□	□	X
b.	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	□	□	□	X

a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? ..... No Impact

b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? ..... No Impact

Discussion (a. and b.)

According to the Contra Costa County General Plan, the nearest mineral resource or mineral resource recovery site within the City of Clayton is the Cemex Quarry, located approximately 1.29 miles west of the project site. Because the project site is not within the immediate vicinity of the Cemex Quarry or any of the other identified areas of important mineral deposits, the project would not interfere with existing operations or access to such deposits. Therefore, the proposed project would have ***no impact*** to mineral resources.

13. NOISE.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project result in:					
a.	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	□	X		□
b.	Generation of excessive groundborne vibration or groundborne noise levels?	□	□	X	□
c.	For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	□	□	X	□

a. Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? .... Less-Than-Significant With Mitigation Incorporated

Discussion (a.)

The following discussion is based on an Environmental Noise Assessment (ENA) prepared for the proposed project by Bollard Acoustical Consultants, Inc (see Appendix D).[25]

Clayton Noise Standards

For transportation noise sources (traffic, rail, aircraft) affecting new residential land uses, the Noise Element of the City of Clayton General Plan establishes an exterior noise level standard of 60 dB Ldn, applied at outdoor activity areas of the residential uses. The intent of this standard is to provide an acceptable exterior noise environment for outdoor activities. Additionally, the City of Clayton utilizes an interior transportation noise level standard of 45 dB Ldn or less within noise-sensitive residential dwellings. The intent of this interior noise limit is to provide a suitable environment for indoor communication and sleep.

Existing Ambient Noise Levels

The existing noise environment at the project site is primarily defined by traffic Marsh Creek Road. In order to quantify the ambient existing noise levels at the project site, a long-term, 48-hour noise level survey was conducted on the project site as part of the ENA (see

[25] Bollard Acoustical Consultants, Inc. *Environmental Noise Assessment, Oak Creek Canyon 6-Lot Subdivision, Clayton, California.* October 3, 2017.

Figure 15). The results of the noise level measurement survey are summarized in Table 5 below. As shown in the table, the measured ambient L_{dn} noise levels at the project site currently exceed the City's 60 dB L_{dn} exterior noise level standard.

Table 5
Summary of Ambient Noise Level Measurement

Site	Date	L_{dn} (dB)	Average Measured Hourly Noise Levels (dB)					
			Daytime (7 AM to 10 PM)			Nightime (10 PM to 7 AM)		
			L_{eq}	L_{50}	L_{max}	L_{eq}	L_{50}	L_{max}
1	September 13-14, 2017	66	62	56	77	59	46	73
1	September 14-15, 2017	64	61	55	74	57	37	70

Source: Bollard Acoustical Consultants, Inc., 2017.

Construction Noise Analysis

During project construction, heavy equipment would be used for grading excavation, paving, and building construction, which would increase ambient noise levels when in use. Noise levels would vary depending on the type of equipment used, how the equipment is operated, and how well the equipment is maintained. Noise exposure at any single point outside the project site would vary depending on the proximity of construction activities to that point.

Standard construction equipment, such as graders, backhoes, loaders, and trucks, would be used for the proposed construction work. The range of maximum noise levels for various types of construction equipment at a distance of 50 feet is depicted in Table 6 below. The noise values represent maximum noise generation, or full power operation of the equipment. As one increases the distance between equipment, or increases separation of areas with simultaneous construction activity, dispersion and distance attenuation reduce the effects of combining separate noise sources.

The nearest sensitive receptors to the proposed project are single-family residences located approximately 100 feet to the south of the proposed project site, across Marsh Creek Road. As shown in Table 6, construction activities typically generate noise levels ranging from approximately 75 to 90 dB L_{max} at a reference distance of 50 feet from the construction activities. The noise levels from construction operations decrease at a rate of approximately 6 dB per doubling of distance from the source. As a result, maximum construction noise levels would range from 69 to 84 dB L_{max} at the nearest existing residences. In addition, typical residential construction provides a noise level reduction of approximately 25 dB with the windows closed, which would reduce the maximum noise levels within the off-site residences to approximately 44 to 59 dB L_{max}. Although construction activities would only occur for a limited duration, project construction activities could result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project, though such levels would not likely substantially exceed existing ambient noise levels caused by local traffic on Marsh Creek Road. Nevertheless, impacts resulting from the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance during construction could be potentially significant.

Figure 15
Project Area and Traffic Noise Measurement Locations

Bollard Acoustical Consultants, Inc., 2017.

Table 6 Construction Equipment Noise Emission Levels	
Equipment	**Typical Sound Level (dBA) 50 Feet from Source**
Air compressor	81
Backhoe	80
Compactor	82
Concrete mixer	85
Concrete ump	82
Concrete vibrator	76
Crane, mobile	83
Dozer	85
Generator	81
Grader	85
Impact Wrench	85
Jackhammer	88
Loader	85
Paver	89
Pneumatic tool	85
Pump	76
Roller	74
Saw	76
Source: Bollard Acoustical Consultants, Inc, 2017.	

Future Traffic Noise at the Project Site

This section evaluates the noise effects of Marsh Creek Road vehicular traffic onto future residences, which is considered an effect of the environment on the project. Impacts of the environment on a project (as opposed to impacts of a project on the environment) are beyond the scope of required California Environmental Quality Act (CEQA) review. "[T]he purpose of an EIR is to identify the significant effects of a project on the environment, not the significant effects of the environment on the project." (*Ballona Wetlands Land Trust v. City of Los Angeles,* (2011) 201 Cal.App.4th 455, 473 (*Ballona*).) The impacts discussed in this section relate to effects of existing environmental noise sources on future residents of the project (e.g. background traffic on surrounding streets). The California Supreme Court recently held that "CEQA does not generally require an agency to consider the effects of existing environmental conditions on a proposed project's future users or residents. What CEQA does mandate… is an analysis of how a project might exacerbate existing environmental hazards." (*California Building Industry Assn. v. Bay Area Air Quality Management Dist.* (2015) 62 Cal.4th 369, 392; see also *Mission Bay Alliance v. Office of Community Investment & Infrastructure* (2016) 6 Cal.App.5th 160, 197 ["identifying the effects on the project and its users of locating the project in a particular environmental setting is neither consistent with CEQA's legislative purpose nor required by the CEQA statutes"], quoting *Ballona*, *supra*, 201 Cal.App.4th at p. 474.) Therefore, for the purposes of the CEQA analysis, the relevant inquiry is not whether the proposed project's future residents will be exposed to preexisting environmental noise-related hazards, but instead whether project-generated noise will exacerbate the pre-existing conditions. Nonetheless, for informational purposes, this section considers both the proposed project's contribution to on- and off-site noise levels, as well as exposure of

future residents of the proposed project to potential hazards associated with the preexisting noise environment, in order to demonstrate General Plan compliance.

The ENA used the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA-RD-77-108) to predict future traffic noise levels at the outdoor activity areas associated with the proposed project. Future average daily traffic was conservatively estimated by assuming a doubling of traffic volumes relative to baseline conditions in effect when the ENA was performed. The results of the modeling are summarized in Table 7 below. The predicted future traffic noise levels presented account for the proposed six-foot noise barriers at Lots #1 and #2 (see Figure 12). As shown in the table, with the exception of Lot #6, future traffic noise levels at the proposed on-site outdoor activity areas would satisfy the City's 60 dB L_{dn} exterior noise level standard. Noise levels at Lot #6 would be approximately 65 dB L_{dn}.

Table 7
Predicted Future Traffic Noise Levels at Project Residences

	Lot #1	Lot #2	Lot #3	Lot #4	Lot #5	Lot #6
Setback distances from centerline of Marsh Creek Road (feet)						
Backyard Area	110	140	260	330	410	140
Building Facade	130	140	210	260	330	140
Predicted Future Traffic Noise Levels, L_{dn} (dB)						
Backyard Area	58	55	56	54	53	**65**
First-floor building facades	57	55	62	61	59	65
Second-floor building facades	68	68	65	N/A	62	N/A

Notes:

- At the backyards and 1st floor facades of Lots #1 and #2, the predicted traffic noise levels include the attenuation provided by the proposed six-foot tall noise barriers. Project topography was accounted for in the noise barrier calculations. Noise barrier offsets were not applied at unshielded upper floor facades.
- The noise level at second-floor building facades includes an offset of +3.0 dB to account for reduced ground absorption of noise at elevated positions.

Source: Bollard Acoustical Consultants, Inc. 2017.

According to the ENA, future Marsh Creek Road traffic noise levels are predicted to be 65 dB Ldn within the backyard of Lot #6, exceeding the City of Clayton exterior noise level standard of 60 dB Ldn by 5 dB. An analysis of noise barrier effectiveness was conducted for Lot #6 to determine the required noise barrier height to sufficiently reduce traffic noise levels below the City's exterior criteria. According to the ENA, an additional six-foot-tall solid noise barrier would be required at Lot #6 (see Figure 16) in order to reduce the exterior traffic noise levels at the nearest outdoor activity areas and first-floor building facades to acceptable levels. Installation of the recommended noise barrier would reduce traffic noise levels at the outdoor activity area of Lot #6 to 58 dB L_{dn}, which would satisfy the City's 60 dB L_{dn} exterior noise level standard.

As shown in Table 7, future exterior noise levels would be approximately 55 to 62 dB L_{dn} at the first-floor facades of the proposed buildings nearest to Marsh Creek Road. Due to reduced ground absorption at elevated positions and lack of shielding by the proposed and recommended noise barriers, noise levels at the second-floor facades would be approximately 62 to 68 dB L_{dn}. In order to satisfy the City's 45 dB L_{dn} interior noise level standard, minimum noise reductions of 17 and 23 dB would be required of the first- and

upper-floor building facades, respectively. Per the ENA, standard residential construction typically results in an exterior to interior noise reduction of about 25 dB with windows closed and approximately 15 dB with windows open. Therefore, standard construction practices would be adequate for both first-floor and elevated upper-floor facades of all residences in the development. The City of Clayton will require the project applicant to note the noise barrier measurement on project improvement plans as a condition of approval. The noise barrier shall be constructed of masonry or pre-cast panels and installed at the locations specified in Figure 16 of this IS/MND. The final design of the noise barrier shall be approved by the Building Official prior to building permit issuance. Therefore, with the required condition of approval noted above, traffic noise at the proposed single-family residences would not conflict with the City's applicable interior or exterior noise thresholds. Overall, future traffic noise at the proposed sensitive receptors would be less-than-significant.

Future Traffic Noise at Existing Sensitive Receptors

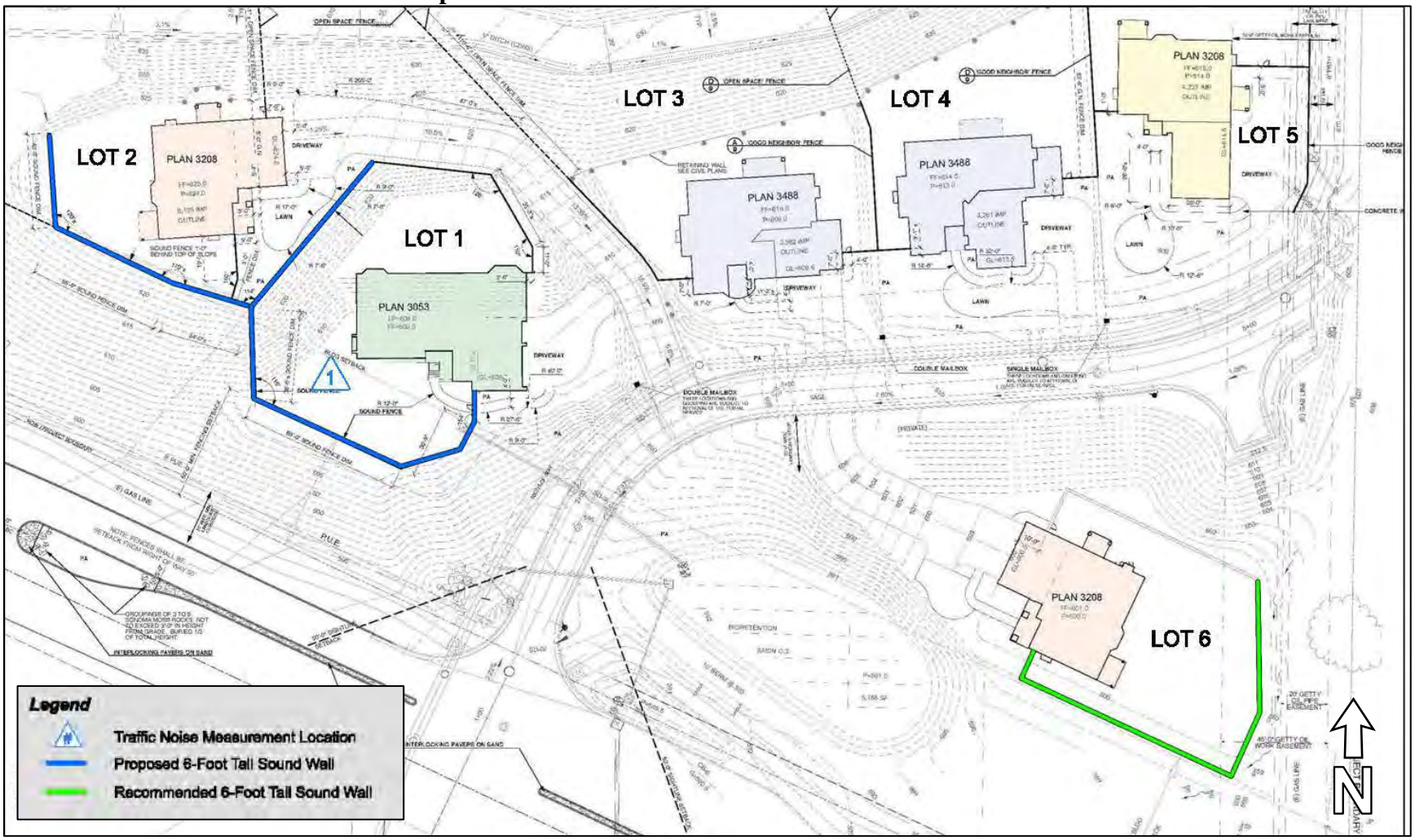
To assess noise level increases on local roadways associated with project-generated traffic, trips associated with the proposed project were added to baseline traffic on Marsh Creek Road. Per the ENA, the proposed six single-family residences would generate approximately 60 average daily trips (ADT). Assuming a vehicle speed of 50 miles per hour, 60 vehicle trips, and a distance of 100 feet from the centerline of Marsh Creek Road, the project-generated trips would result in a traffic noise level of increase of less than 0.1 dB L_{dn}. The Federal Interagency Committee on Noise (FICON) considers a traffic noise level increase from 1.5 to 5 dB to be significant, depending upon the ambient noise level. In addition, traffic noise level increases of less than 1 dB are considered to be well below the threshold of perception, and would be considered inaudible. Because the project-generated 0.1 dB L_{dn} increase is below even the lowest FICON threshold of 1.5 dB, the project-related increase in traffic noise levels would be imperceptible at existing residences located south of Marsh Creek Road and would be considered less than significant.

As such, the project-generated traffic noise level increases would not represent a substantial increase in ambient noise levels in the area and would not affect any existing nearby residences or other sensitive uses in the area.

Conclusion

Based on the above, traffic generated by the proposed project would not substantially increase traffic noise levels on Marsh Creek Road. As such, the proposed project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. In addition, with construction of the recommended noise barrier, future residents of the proposed single-family home at Lot #6 would not be exposed to noise levels in excess of the 60 dB L_{dn} exterior noise level standard established in the City's General Plan.

Figure 16
Proposed and Recommended Noise Barrier Locations



Bollard Acoustical Consultants, Inc., 2017.

However, the proposed project could result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance during construction. Therefore, considering the potential for construction activities to result in temporary increases in noise levels in the project area, a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would ensure that the above potential impact is reduced to a *less-than-significant* level.

Mitigation Measure 12. *During grading and construction, the project contractor shall ensure that the following measures are implemented, consistent with the recommendations in the Environmental Noise and Analysis prepared for the proposed project:*

a) Grading and construction activities shall be limited to the daytime hours between 7:00 AM to 5:00 PM Monday through Friday, as specified in Section 15.01.101 of the Clayton Municipal Code. Any such work beyond said hours and days shall be strictly prohibited unless previously specifically authorized in writing by the City Engineer or designee or by project conditions of approval;

b) All noise-producing project equipment and vehicles using internal-combustion engines shall be equipped with manufacturers-recommended mufflers and be maintained in good working condition;

c) All mobile or fixed noise-producing equipment used on the project site that are regulated for noise output by a federal, State, or local agency shall comply with such regulations while in operation on-site;

d) Electrically powered equipment shall be used instead of pneumatic or internal combustion-powered equipment, where feasible;

e) Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors; and

f) Construction site and access road speed limits shall be established and enforced during the construction period.

The requirements above shall be included, via notation, on the final grading plan submitted for review and approval by the Community Development Director prior to grading permit issuance.

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels? ..... Less-Than-Significant Impact

Discussion (b.)

Similar to noise, vibration involves a source, a transmission path, and a receiver. However, noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration depends on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities (PPV) in inches per second (in/sec). Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of PPV.

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 8, which was developed by Caltrans, shows the vibration levels that would normally be required to result in damage to structures. As shown in the table, the threshold for architectural damage to structures is 0.20 in/sec PPV and continuous vibrations of 0.10 in/sec PPV, or greater, would likely cause annoyance to sensitive receptors.

The proposed project would only cause elevated vibration levels during construction, as the proposed project would not involve any uses or operations that would generate substantial groundborne vibration. Although noise and vibration associated with construction of the project would add to the noise and vibration environment in the immediate project vicinity, construction activities would be temporary in nature and are anticipated to occur during normal daytime working hours. Because the proposed project would not cause continuous, long-term vibrations, the project would not be expected to result in extended annoyance to the nearby sensitive receptors.

The primary vibration-generating activities associated with the proposed project would occur during grading, placement of utilities, and construction of foundations. Table 9 shows the typical vibration levels produced by construction equipment at various distances. The most substantial source of groundborne vibrations associated with project construction would be the use of vibratory compactors.

Table 8 Effects of Vibration on People and Buildings			
PPV		**Human Reaction**	**Effect on Buildings**
in/sec	**mm/sec**		
0.15 to 0.30	0.006 to 0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of "architectural" damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage
10 to 15	0.4 to 0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage
Source: Caltrans. Transportation Related Earthborne Vibrations. TAV-02-01-R9601. February 20, 2002.			

Table 9 Vibration Levels for Various Construction Equipment		
Type of Equipment	**PPV at 25 feet (in/sec)**	**PPV at 50 feet (in/sec)**
Large Bulldozer	0.089	0.029
Loaded Trucks	0.076	0.025
Small Bulldozer	0.003	0.000
Auger/drill Rigs	0.089	0.029
Jackhammer	0.035	0.011
Vibratory Hammer	0.070	0.023
Vibratory Compactor/roller	0.210	0.070
Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Guidelines, May 2006.		

The nearest existing building is located approximately 100 feet south of the project site boundary, across Marsh Creek Road. At a distance of 100 feet, the PPV from even the most vibration-intensive equipment would be substantially diminished, and below the 0.2 PPV threshold for building damage. While the CCWD water tank is located in closer proximity, it is still greater than 50 feet from proposed construction areas, and thus, not at risk from vibration damage. Furthermore, construction is temporary and construction equipment would operate intermittently throughout the course of a day, would be restricted to daytime hours per the City of Clayton Municipal Code Section 15.01.101, and would likely only occur over portions of the improvement area at a time. Therefore, persons are not predicted to be exposed to excessive vibration or groundborne noise levels associated with the proposed project, and a ***less-than-significant*** impact would occur.

c. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? ..... Less-Than-Significant Impact

Discussion (c.)

The nearest airport to the proposed project site is the Buchanan Field Airport, located approximately 8.25 miles to the west of the site. Aircraft-related noise, if audible at the project site, would be extremely minimal. Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels associated with air traffic and a ***less-than-significant*** impact would occur.

14. POPULATION AND HOUSING.

ISSUES		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?	□	□	X	□
b.	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	□	□	□	X

a. Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)? ..... Less-Than-Significant Impact

Discussion (a.)

The proposed project would include the development of six single-family homes, and, thus, would induce population growth. Using the Department of Finance average persons per household value for the City of Clayton of 2.72, the proposed project's addition of six residential units would result in approximately 14 new residents.[26] The Department of Finance estimates the 2019 population of Clayton, based on the 2010 Census, to be approximately 10,897.[27] The increase in population would constitute a 0.17 percent increase in in the City's population. A 0.17 percent increase in population would not be considered substantial growth. It should be noted that population growth itself does not constitute an environmental impact; rather, increased demands on the physical environment resulting from increases in population are considered environmental impacts. Physical environmental effects associated with development of the proposed project area are evaluated throughout this IS/MND. For example, as discussed in Section 19, Utilities and Service Systems, of this IS/MND, adequate utility infrastructure would be available to support the proposed project. Consequently, a ***less-than-significant*** impact would occur in regard to the project inducing substantial population growth.

[26] California Department of Finance. *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2019, with 2010 Benchmark.* Available at: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/. Accessed June 2020.

[27] *Ibid.*

b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? ..... No Impact

Discussion (b.)

The project site is currently vacant and absent of housing or other habitable structures. As such, implementation of the proposed project would not displace substantial numbers of housing or people, necessitating the construction of replacement housing elsewhere, and ***no impact*** would occur.

15. PUBLIC SERVICES.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:					
a.	Fire protection?	□	□	X	□
b.	Police protection?	□	□	X	□
c.	Schools?	□	□	X	□
d.	Parks?	□	□	X	□
e.	Other public facilities?	□	□	X	□

a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection? ..... Less-Than-Significant Impact

b. Police protection? ..... Less-Than-Significant Impact

Discussion (a. and b.)

The Contra Costa County Fire Protection District (CCCFPD) provides fire prevention, suppression, and emergency medical response for advanced and basic life support to nine cities, including Clayton, and much of the unincorporated territory in the central and western portions of Contra Costa County. The nearest fire station is located at 6500 Center Street, approximately 1.6 miles north of the project site by way of Marsh Creek Road. Police protection services would be provided for the project by the City of Clayton Police Department. The Police Department is located at 6000 Heritage Trail, which is approximately two miles from the proposed project site.

The threshold for the impact, as identified in Appendix G of the CEQA Guidelines, is related to whether the project would result in substantial adverse physical impacts associated with the provision of new or physically altered fire or police facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios or performance objectives. In the court case *City of Hayward v. Board of Trustees of the California State University,* the First District Court of Appeal affirmed that the focus of CEQA analysis should be limited to physical environmental impacts related to a project.[28] The court held that, "The need for additional fire protection services is not an *environmental* impact that CEQA requires a Project Proponent to mitigate."

[28] First District Court of Appeal. *City of Hayward v. Board of Trustees of the California State University*. (November 30 ,2015) 242 Cal.App.4th 833.

Given the relatively modest amount of development included in the proposed project (six units), the project would not substantially increase demand for fire and police protection services such that construction of a new facility or expansion of an existing facility would be required. Furthermore, the amendments being requested would only result in one additional single-family residential unit, beyond what has been anticipated for the project site in the City's planning efforts. Moreover, the City of Clayton Municipal Code Chapter 3.18 establishes development fees to off-set any potential impacts on fire services from new developments. The developer is required to pay the fire protection fee prior to the issuance of an occupancy permit for each unit.

Because the project would not necessitate new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire or police protection, a ***less-than-significant*** impact would result.

c. Schools?..... Less-Than-Significant Impact

Discussion (c.)

The City of Clayton is located within the Mt. Diablo Unified School District (MDUSD). Mt. Diablo Elementary and Diablo View Middle Schools serve the City of Clayton.

Because the proposed project would involve the construction of six residential units, the project could add students to the MDUSD. However, the construction of six new residential units would not create a significant number of new K-12 students. Furthermore, Senate Bill (SB) 50 requires the payment of impact fees to avoid potential impacts to school facilities. According to SB 50, payment of the necessary school impact fees for the project would be considered full and satisfactory CEQA mitigation. Proposition 1A/SB 50 prohibits local agencies from using the inadequacy of school facilities as a basis for denying or conditioning approvals of any "[…] legislative or adjudicative act […] involving […] the planning, use, or development of real property" (Government Code 65996[b]). Because the project applicant would be required to pay school impact fees to the MDUSD, the proposed project would have a ***less-than-significant*** impact on schools in the area.

d. Parks?..... Less-Than-Significant Impact

Discussion (d.)

The proposed project would include six residential units, and, thus, would result in a relatively modest increase in demand for parks and recreational facilities. The project site is located adjacent to several nearby City parks, including the Clayton Community Park, which would likely be used by future project residents. In addition, Mount Diablo State Park is located to the south of the site. Section 16.12 of the City of Clayton Municipal Code requires all new subdivisions to dedicate land, pay a fee in-lieu thereof, or both for park or recreational purposes. For projects with 50 parcels or less, such as the proposed project, the subdivider must pay a fee equal to the land value of the portion of the local park required to serve the needs of the project residents. Payment of in-lieu fees would help to fund recreational facilities within the City. Therefore, the proposed project would result in a ***less-than-significant*** impact to park facilities.

e. Other public facilities? ..... Less-Than-Significant Impact

Discussion (e.)

The proposed project would increase demands for other general governmental services, including, but not limited to, libraries and general City maintenance services. However, given the limited amount of development proposed (six single-family units), such demands would not be substantial. With payment of the required development impact fees by the project applicant, the proposed project would result in a ***less-than-significant*** impact in regard to such public facilities.

16. RECREATION.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	□	□	X	□
b.	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	□	□	X	□

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? ..... Less-Than-Significant Impact

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? ..... Less-Than-Significant Impact

Discussion (a. and b.)

The project site is located adjacent to several nearby City parks, including the Clayton Community Park, which would likely be used by future project residents. In addition, Mount Diablo State Park is located to the south of the site. As discussed in Section 15, Public Services, of this IS/MND, the proposed project would be subject to the payment of an in-lieu fee in accordance with the City of Clayton Municipal Code Section 16.12. The payment of fees would be used to upgrade and maintain existing facilities, as well as provide for future facilities. Furthermore, the proposed project would only include six residential lots. As such, the low number of anticipated residents would not significantly deteriorate existing facilities or require the construction of new facilities. Therefore, given that the proposed project would be subject to the payment of the City's in-lieu fee, the project would not increase the use of existing parks or recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated and the project would not include or require the construction or expansion of recreational facilities. Thus, a ***less-than-significant*** impact would occur.

17. TRANSPORTATION.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	□	□	X	□
b.	Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	□	□	X	□
c.	Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	□	□	□	X
d.	Result in inadequate emergency access?	□	□	X	□

a. Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities? ..... Less-Than-Significant Impact

Discussion (a.)

Primary access to the proposed project site would be provided by a new roadway that would extend northeastward through the site from the existing Marsh Creek Road/Diablo Parkway intersection.

The Institute of Traffic Engineer's (ITE) *Trip Generation Handbook* was used to estimate weekday AM, PM, and daily trip generation forecasts for the proposed project.[29] As shown in Table 10, implementation of the proposed project would be expected result in 57 new daily vehicle trips, with approximately five new AM and six new PM peak hour vehicle trips.

Table 10
Weekday Project Trip Generation Rates and Estimates

		Daily	AM Peak Hour				PM Peak Hour			
Units	Rate	Trips	Rate	In	Out	Total	Rate	In	Out	Total
6	9.52	57	0.75	1	3	5	1.00	4	2	6

Note: AM and PM Peak Hour total trips may not match combined 'In' and 'Out' trips due to rounding.

Source: Institute of Transportation Engineers, 2012.

According to the Contra Costa Transportation Authority (CCTA) Congestion Management Plan (CMP), any land development application generating less than 100 peak hour trips is not required to prepare a study of its traffic impacts on the CMP network.[30] Because the proposed project would generate substantially less than 100 peak hour trips, preparation of a traffic study is not required.

[29] Institute of Transportation Engineers. *Trip Generation Handbook, 9th Edition*. September 2012.

[30] Contra Costa Transportation Authority. *2019 Update of the Contra Costa Congestion Management Program* [pg. 72]. Adopted December 18, 2019.

The project area is currently provided transit service by the Central Contra Costa Transit Authority. The nearest bus stop relative to the project site is located at the Marsh Creek Road/Bigelow Street intersection, approximately 0.7-mile west of the site. The construction of six single-family residences would not result in the need for expanded bus service in Clayton. The project does not include changes to existing bicycle infrastructure, or changes that would conflict with the use of bicycle facilities as an alternative means of transportation.

With regard to pedestrian facilities, the project would include the construction of a six-foot wide detached meandering trail along the project frontage at Marsh Creek Road. The trail would connect to an existing sidewalk located west of the project site, allowing for greater pedestrian connectivity in the project area.

Due to the low number of project-generated trips, the project would not be expected to adversely impact operations at nearby signalized intersections or roadways. In addition, the project applicant would be required to pay off-site arterial street improvement impact fees to the City to offset congestion issues on local arterial roadways. Therefore, the proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities and a ***less-than-significant*** impact would occur.

b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)? ..... No Impact

Discussion (b.)

Section 15064.3 of the CEQA Guidelines provides specific considerations for evaluating a project's transportation impacts. Per Section 15064.3, analysis of vehicle miles traveled (VMT) attributable to a project is the most appropriate measure of transportation impacts.

Per Section 15064.3(3), a lead agency may analyze a project's VMT qualitatively based on the availability of transit, proximity to destinations, etc. While changes to driving conditions that increase intersection delay are an important consideration for traffic operations and management, LOS methodology does not fully describe environmental effects associated with fuel consumption, emissions, and public health. Section 15064.3(3) changes the focus of transportation impact analysis in CEQA from measuring impact to drivers to measuring the impact of driving.

The Governor's Office of Planning and Research prepared the *Technical Advisory on Evaluating Transportation Impacts in CEQA* in December of 2018. As noted therein, lead agencies may screen out VMT impacts using project size, maps, transit availability, and provision of affordable housing. Many local agencies have developed screening thresholds to indicate when detailed analysis is needed. Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy or general plan, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant impact. Given that that the proposed project would generate approximately 57 ADT, the project would not result in a significant amount of VMT.

Furthermore, as noted in question 'a' above, the project site would be served by the Central Contra Costa Transit Authority, with bus stops provided to the west of the project site. In addition, development of the proposed project would increase connectivity to the nearby neighborhoods and include pedestrian infrastructure within the project site. For example, the proposed project would include construction of a six-foot wide meandering trail along the Marsh Creek Road frontage that would connect to an existing sidewalk to the west of the project site. In addition, the project site is located in close proximity to nearby schools, such as Diablo View Middle School to the west. By providing pedestrian and bicycle connectivity between the proposed residential units and the surrounding neighborhoods, the VMT associated with the proposed project would be minimized. Therefore, the proposed project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b), and a ***less-than-significant*** impact would occur.

c. Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? ..... Less-Than-Significant Impact

d. Would the project result in inadequate emergency access? ..... Less-Than-Significant Impact

Discussion (c. and d.)

The proposed project does not include changes to existing roadways or the introduction of any design features that would be considered hazardous. The proposed project would provide an access point at Marsh Creek Road, which would provide sufficient emergency access to the site. As such, the project would not substantially increase hazards due to design features or incompatible uses, and emergency access to the site would be adequate. Therefore, the project would result in a ***less-than-significant*** impact.

18. TRIBAL CULTURAL RESOUCES

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:					
a.	Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).	□	□	X	□
b.	A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	□	□	X	□

a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)? ..... Less-Than-Significant Impact

b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe? ..... Less-Than-Significant Impact

Discussion (a. and b.)

As discussed in Section 5, Cultural Resources, of this IS/MND, the project site does not contain any existing permanent structures or any other known resources listed or eligible for list in the California Register of Historical Resources, or in a local register oforical resources as defined in Public Resources Code Section 5020.1(k), and does not contain known resources that could be considered historic pursuant to the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. Tribal cultural resources are generally defined by Public Resources Code 21074 as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe. In compliance with Assembly Bill 52 (AB 52) consultation requirements, the City of Clayton sent notification letters to those tribes who had previously requested notification of projects in the City. Responses from such tribes have not been received to date. In addition, in compliance with Senate Bill 18 (SB 18), consultation letters have been sent out to the appropriate Native American tribes who are affiliated with the project area, as

provided by the NAHC. Responses from the tribes have not been received to date. In the absence of information supplied by the tribes, the City relied on other sources of information to determine whether the project could cause a substantial adverse change in the significance of a tribal cultural resource.

A Sacred Lands File search, performed by the NAHC for the immediate project area, failed to indicate the presence of Native American cultural resources in the project area. Additionally, a search of the CHRIS was completed at the NWIC. As discussed in Section 6, Cultural Resources, of this IS/MND, the CHRIS search did not identify any cultural resources on the site. Given the negative results of the NAHC sacred lands file search, and the CHRIS search, as well as the City's compliance with AB 52, tribal cultural resources are not expected to occur within the site. Furthermore, with implementation of Mitigation Measure 6 and 7, the proposed project would not result in a substantial adverse change in the significance of a tribal cultural resource. Thus, a ***less-than-significant*** impact to tribal cultural resources would occur.

19. UTILITIES AND SERVICE SYSTEMS.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	□	□	X	□
b.	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	□	□	X	□
c.	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	□	□	X	□
d.	Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	□	□	X	□
e.	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	□	□	X	□

a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?..... Less-Than-Significant Impact

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?..... Less-Than-Significant Impact

c. Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?..... Less-Than-Significant Impact

Discussion (a., b., and c.)

Electricity, natural gas, telecommunications, water, and sanitary sewer services would be provided by way of new connections to existing infrastructure in the immediate project area. Brief discussions of water, sewer service, stormwater drainage, electrical, natural gas, and telecommunications that would serve the proposed project are included below.

Water

Potable water service for the project is required and would be made available by Contra Costa Water District (CCWD) upon completion of financial arrangements and installation of all necessary water facilities to meet the requirements of residential use and fire protection, in accordance with current CCWD and CCCFPD standards. The project would include the connection of an eight-inch water line to an existing water line within Marsh Creek Road.

According to the CCWD's 2015 Urban Water Management Plan, the CCWD does not anticipated any supply deficits in normal years or single-dry years.[31] In future years, multiple dry-year conditions may result in supply shortfalls of up to approximately 30,000 acre-feet per year (af/yr), which equates to approximately 15 percent of the water demand. The CCWD's water supply reliability goal is to meet 100 percent of demand in normal years and a minimum of 85 percent of demand during a drought. Any potential supply shortfalls experienced during dry year conditions would be met through combination of a short-term conservation program or short-term water purchases. CCWD's currently available and planned supplies would be sufficient to meet the District's goal and estimated water demands during average, single-dry, and multiple-dry year conditions during the next 25 years. Given that the CCWD UWMP takes into account future buildout of the service area, and the proposed project's residential density is consistent with what has been anticipated for the site, the increase in water demand associated with the proposed project has generally been anticipated in the UWMP.

Given that the project would be consistent with site's existing land use and zoning designations, increases in demand for water supplies associated with buildout of the site have been previously anticipated by the City. In addition, the project design would be required to adhere to State Building Code standards for water conservation, such as low-flow plumbing fixtures, as well as the City's water-conserving guidelines for landscaping, as set forth in Chapter 17.80 of the Municipal Code. Therefore, the proposed project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, and the project would have sufficient water supplies available to serve the project from existing resources.

Sewer Service

The wastewater collection system within the City of Clayton is owned by Clayton and maintained by the City of Concord. Concord has a contract with Central Contra Costa Sanitary District (CCCSD) to treat wastewater. The CCCSD treatment plant currently treats an average of 45 million gallons per day (MGD). The CCCSD treatment plant's permitted physical capacity is 54 MGD. According to the Growth Management Element of the City of Clayton's General Plan, the plant's maximum capacity of 54 MGD is projected to accommodate buildout until the year 2040.[32, 33] Sewer infrastructure to serve the proposed

[31] Contra Costa Water District. *2015 Urban Water Management Plan for the Contra Costa Water District.* June 2016.

[32] City of Clayton. *City of Clayton General Plan Section XI: Growth Management Element* [pg. 16]. Available at: https://ci.clayton.ca.us/community-development/planning/long-range-planning/. Accessed June 2020.

[33] Email communication with Russell B. Leavitt. Engineering Assistant III. Central Contra Costa Sanitary District.

project would be extended within the on-site roadway from existing sewer lines located in Marsh Creek Road. Specifically, an eight-inch sanitary sewer line would be extended from an existing manhole within Marsh Creek Road and routed to the proposed lots.

Given the CCCSD treatment plant's current surplus capacity, and the fact that the project would result in a minimal increase in the demand for wastewater treatment capacity, adequate capacity exists to accommodate the slight increase in sewer demand that would be created by the proposed residential development. Therefore, the proposed project would not exceed treatment requirements of the RWQCB, and the CCCSD would be capable of serving the project's projected demand in addition to the CCCSD's existing commitments.

Stormwater Systems

Development of the proposed project would result in an increase in impervious surfaces on the project site, which would alter the existing drainage pattern of the site. Runoff from pavement and rooftop areas from Lots #1 through #6 and pavement from the proposed roadway would drain to the bioretention basin west of Lot #6 (see Figure 9). Runoff from undeveloped areas of the project site would primarily be self-treating.

While the proposed project would alter the existing drainage pattern of the site, as discussed in the Hydrology and Water Quality section of this IS/MND, the project would be required to comply with C.3 Standards and include appropriate site design measures, source controls, and hydraulically-sized stormwater treatment measures. As a result, no net increase in stormwater drainage runoff from the site would be expected. In the absence of an increase in storm water drainage leaving the site, the proposed project would not require the construction of new off-site stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Other Utilities

Electricity, natural gas, and telecommunications utilities would be provided by way of connections to existing infrastructure located within the immediate project vicinity. PG&E would provide electricity and natural gas services to the project site. The proposed project would not require major upgrades to, or extension of, existing infrastructure. Thus, impacts to electricity, natural gas, and telecommunications infrastructure would be less than significant.

Conclusion

Based on the above, the project would result in a ***less-than-significant*** impact related to the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

May 04, 2016.

d. Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? ..... Less-Than-Significant Impact

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste? ..... Less-Than-Significant Impact

Discussion (d. and e.)

Solid waste from the City of Clayton is disposed of at Keller Canyon County landfill. Keller Canyon Landfill covers 2,600 acres of land; 244 acres are permitted for disposal. The site currently handles 2,500 tons of waste per day, although the permit for the site allows up to 3,500 tons of waste per day to be managed at the facility. According to the California Department of Resources Recycling and Recovery (CalRecycle), the Keller Canyon Landfill has a remaining capacity of 63,408,410 cubic yards out of a total permitted capacity of 75,018,280 or 85 percent remaining capacity.[34] As such, adequate capacity exists to accommodate the relatively modest amount of waste that would be generated by the six proposed single-family residences.

It should be noted that the City is required by AB 939 to ensure that it achieves and maintains the diversion and recycling mandates of the State. Construction of the project would comply with the construction and demolition debris recycling requirements of Chapter 15.80 of the City's Municipal Code, which requires that a waste management plan be prepared for both demolition and new construction. The waste management plan must address all materials that would not be acceptable for disposal in the sanitary landfill. Therefore, as the project is required to comply with the City's Municipal Code, and sufficient capacity exists at the Keller Canyon Landfill, implementation of the proposed project would result in a ***less-than-significant*** impact related to solid waste services.

[34] California Department of Resources Recycling and Recovery (CalRecycle). *Facility/Site Summary Details: Keller Canyon Landfill (07-AA-0032)*. Available at: https://www2.calrecycle.ca.gov/swfacilities/Directory/07-AA-0032. Accessed June 2020.

20. WILDFIRE.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:					
a.	Substantially impair an adopted emergency response plan or emergency evacuation plan?	□	□	X	□
b.	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	□	□	X	□
c.	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	□	□	X	□
d.	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	□	□	X	□

a. Substantially impair an adopted emergency response plan or emergency evacuation plan? ..... Less-Than-Significant Impact

b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? ..... Less-Than-Significant Impact

c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? ..... Less-Than-Significant Impact

d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? ..... Less-Than-Significant Impact

Discussion (a., b., c., and d.)

According to the CAL FIRE Fire and Resource Assessment Program, the project site is not located within or near a state responsibility area or lands classified as a Very High Fire Hazard Severity Zone (VHFHSZ).[35] The nearest VHFHSZ is approximately 0.6-mile south of the project site. However, according to the Diablo Fire Safe Council, the City of Clayton

[35] California Department of Forestry and Fire Protection. *Contra Costa County, Very High Fire Hazard Severity Zones in LRA*. January 7, 2009.

is located within a WUI. The WUI is defined as an area in which wildlands and communities are sufficiently close to each other to present a credible risk of fire spreading from one to another.[36] Fire services to the Clayton area are provided by the CCCFPD, with the nearest station to the site located on Center Street, approximately 1.35 miles northwest of the project site. The risk of wildfire to the project site is reduced by the proposed project's location near existing development to the south. Additionally, the development of the project site from annual grasses, trees, and shrubs to residential land uses may reduce the project site's fire hazard to surrounding residences.

The proposed residential units are required to be designed in compliance with all applicable State and local standards and recommendations for new development, such as the CCCFPD's requirements for providing a water supply system for fire protection, and providing adequate emergency and fire access. In addition, Chapter 7A of the CBC includes specific requirements related to the design and construction of new buildings located within a WUI. For example, Chapter 7A specifies that a fire sprinkler system is required to be installed in order to protect against fire hazards in a WUI. In compliance with the CBC (specifically Section 903.2.1.3, Group A-3), the design of the residences would include automatic fire sprinklers, and fire alarm systems would be incorporated pursuant to CFC requirements. Such features would help to address fire situations within the site, which would reduce the demand for fire protection services from the project site.

Based on the above, the proposed project would not be subject to risks related to wildfires, and a ***less-than-significant*** impact would occur.

[36] Diablo Fire Safe Council. *Clayton Morgan Territory Wildfire Action Plan: Public Review Draft*. January 25, 2016.

21. MANDATORY FINDINGS OF SIGNIFICANCE.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a.	Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	□	□	X	□
b.	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	□	□	X	□
c.	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	□	□	X	□

a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? ..... Less-Than-Significant Impact

Discussion (a.)

As discussed in Section 4, Biological Resources, of this IS/MND, while a limited potential exists for western burrowing owl and birds protected by the MBTA to occur on-site, implementation of Mitigation Measure 1 through Mitigation Measure 4 would ensure that any impacts related to special-status species would be reduced to a less-than-significant level.

In addition, the project site does not contain any on-site structures or known historic or prehistoric resources. Implementation of the proposed project is not anticipated to have the potential to result in impacts related to historic or prehistoric resources. Nevertheless, Mitigation Measure 6 and Mitigation Measure 7 would ensure that in the event that prehistoric resources are discovered within the project site, such resources would be protected in compliance with the requirements of CEQA and other State standards.

Considering the above, the proposed project would not degrade the quality of the environment, substantially reduce or impact the habitat of fish or wildlife species, cause fish or wildlife populations to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. Therefore, a ***less-than-significant*** impact would occur.

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? ..... Less-Than-Significant Impact

Discussion (b.)

The proposed project, in conjunction with other development within the City of Clayton, could incrementally contribute to cumulative impacts in the area. However, as demonstrated in this IS/MND, all potential environmental impacts that could occur as a result of project implementation would be reduced to a less-than-significant level through compliance with the mitigation measures included in this IS/MND, as well as applicable General Plan policies, Municipal Code standards, and other applicable local and State regulations.

All cumulative impacts related to air quality, noise, and transportation are either less than significant after mitigation or less than significant and do not require mitigation. Given the scope of the project, any incremental effects would not be considerable relative to the effects of all past, current, and probably future projects. In addition, although the project requests amendments to the General Plan and Marsh Creek Road Specific Plan, residential development of the site has been anticipated, and development of one additional residential unit beyond that which has been anticipated in the City's planning documents (i.e., 5 residential units versus 6 units) would not result in greater impacts compared to development of the site under current projections. Therefore, when viewed in conjunction with other closely related past, present, or reasonably foreseeable future projects, development of the proposed project would not result in a cumulatively considerable contribution to cumulative impacts, and the project's incremental contribution to cumulative impacts would be ***less than significant***.

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? ..... Less-Than-Significant Impact

Discussion (c.)

As described in this IS/MND, the proposed project would comply with all applicable General Plan policies, Municipal Code standards, other applicable local and State regulations, and mitigation measures included herein. In addition, as discussed in Section 7, Geology and Soils, Section 9, Hazards and Hazardous Materials, and Section 13, Noise, of this IS/MND, the proposed project would not cause substantial effects to human beings,

including effects related to exposure to hazardous materials and noise, after mitigation. Therefore, the proposed project would result in a ***less-than-significant*** impact.

VIII. STAFF AND SOURCES

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